

✓ 507.73

378.73

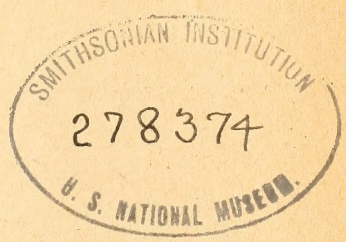
Pat. 5 141249
V, 7-8
51

6

95632
Smith

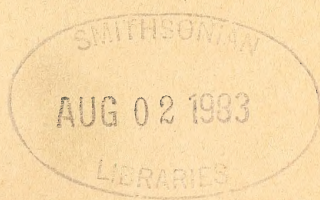
INDIANA UNIVERSITY ⁴² STUDIES

Contributions to Knowledge made by Instruc-
tors and Advanced Students of
the University



VOLUME VII

Nos. 44-47. January, 1920, to December, 1920



BLOOMINGTON, INDIANA

Published by the University

The UNIVERSITY STUDIES constitute a series of University publications, in which are published some of the contributions to knowledge made by instructors and advanced students of the University. At present four numbers are issued a year.

For Sale by the University Bookstore, Bloomington, Ind.

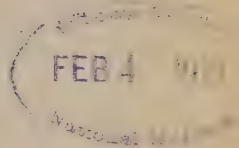
Table of Contents

VOLUME VII

44. THE FISHES OF LAKE VALENCIA, CARACAS, AND OF THE RIO TUY AT EL CONCEJO, VENEZUELA.
45. SOUTH AMERICA WEST OF THE MARACAIBO, ORINOCO, AMAZON, AND TITICACA BASINS, AND THE HORIZONTAL DISTRIBUTION OF ITS FRESH-WATER FISHES.
46. THE FISHES OF THE RIVERS DRAINING THE WESTERN SLOPE OF THE CORDILLERA OCCIDENTAL OF COLOMBIA, RIOS ATRATO, SAN JUAN, DAGUA, AND PATIA.
47. THE FRESH-WATER FISHES OF PANAMA EAST OF LONGITUDE 80° W. THE MAGDALENA BASIN AND THE HORIZONTAL AND VERTICAL DISTRIBUTION OF ITS FISHES.

—By Carl H. Eigenmann, Ph.D., Dean of the Graduate School, Indiana University.

INDIANA UNIVERSITY STUDIES



STUDY No. 44

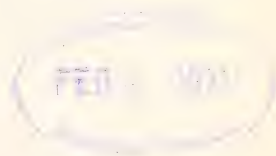
**THE FISHES OF LAKE VALENCIA, CARACAS, AND OF
THE RIO TUY AT EL CONCEJO, VENEZUELA. By CARL
H. EIGENMANN, Dean of the Graduate School, and Head of the
Department of Zoölogy in Indiana University.**

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

STUDY No. 44

THE FISHES OF LAKE VALENCIA, CARACAS, AND OF
THE RIO TUY AT EL CONCEJO, VENEZUELA. By CARL
H. EIGENMANN, Dean of the Graduate School, and Head of the
Department of Zoölogy in Indiana University.



The Fishes of Lake Valencia, Caracas, and of the Rio Tuy at El Concejo, Venezuela

By CARL H. EIGENMANN, Dean of the Graduate School, and Head of the Department of Zoölogy in Indiana University

LITTLE is known concerning the fishes about Caracas, less of those of Lake Valencia (1,421 feet) to the west of it, and still less of the Tuy flowing eastward into an indentation of the Caribbean. Dr. A. S. Pearse of the University of Wisconsin made a collection of fishes in these localities in July and August, 1918. He collected on the Isla del Buro in Lake Valencia on July 9-12, at Maracay, 1,530 feet, in the lake on July 25, in the Rio Tapa Tapa on July 15, in the Rio Castaño on July 16, 27, and in the Rio Bue on July 19, 20, 29, 30. At El Concejo, 2,040 feet, a station between Maracay and Caracas, he collected in the Rio Tiquirito, a tributary of the Tuy on August 1, at its mouth on August 2, and in the Tuy on August 1. Collections were made near Caracas in the Guaire basin on August 4.

Lake Valencia is of particular interest. It was formerly considerably larger and drained regularly thru the Rio Paito and Rio Pao into the Orinoco. It has in historic times become landlocked with occasional overflows. With its tributaries it formed the northernmost sources of the Orinoco basin.

Sievers *Cordillere von Merida*, p. 119, says:

Bisher hat man das Becken des Sees von Valencia als ein besonderes hydrographisches abflussloses Gebiet betrachtet. Es fragt sich nun, ob dies stets der Fall gewesen ist. Humboldt berichtet, dass früher der Rio Pao am Westufer des Sees, ein Fluss, der aus den Quellflüssen Guataparo, Tocuyito und Chirgua entsteht, in den See gegangen und erst seit Ende des 17. Jahrhunderts durch einen Gutsbesitzer nach den Llanos abgeleitet sei, das aber noch 1800 der Caño Camburi zu Zeiten aus dem See herausfloss. Es scheint nun, dass dies sich allmählich vervollkommen hat. Wenigstens berichtet Dr. Alamo in Caracas in einem Aufsatze Estudios sobre el lago de Valencia der Zeitung El Opinion Nacional vom 3 Januar 1884, dass 1817 einige von den Spaniern verfolgte Flüchtlinge auf die Weise der Verfolgung entgingen, dass sie sich am See von Valencia einschifften und durch den Caño Camburi, den Rio Bucarito, den Rio Paito, Rio Pao, Portuguesa, Apuré zum Orinoco hinabfuhren; dass ferner der General Arriento 1853 bei der Befahrung des Sees mittelst eines Dampfers bei Gelegen-

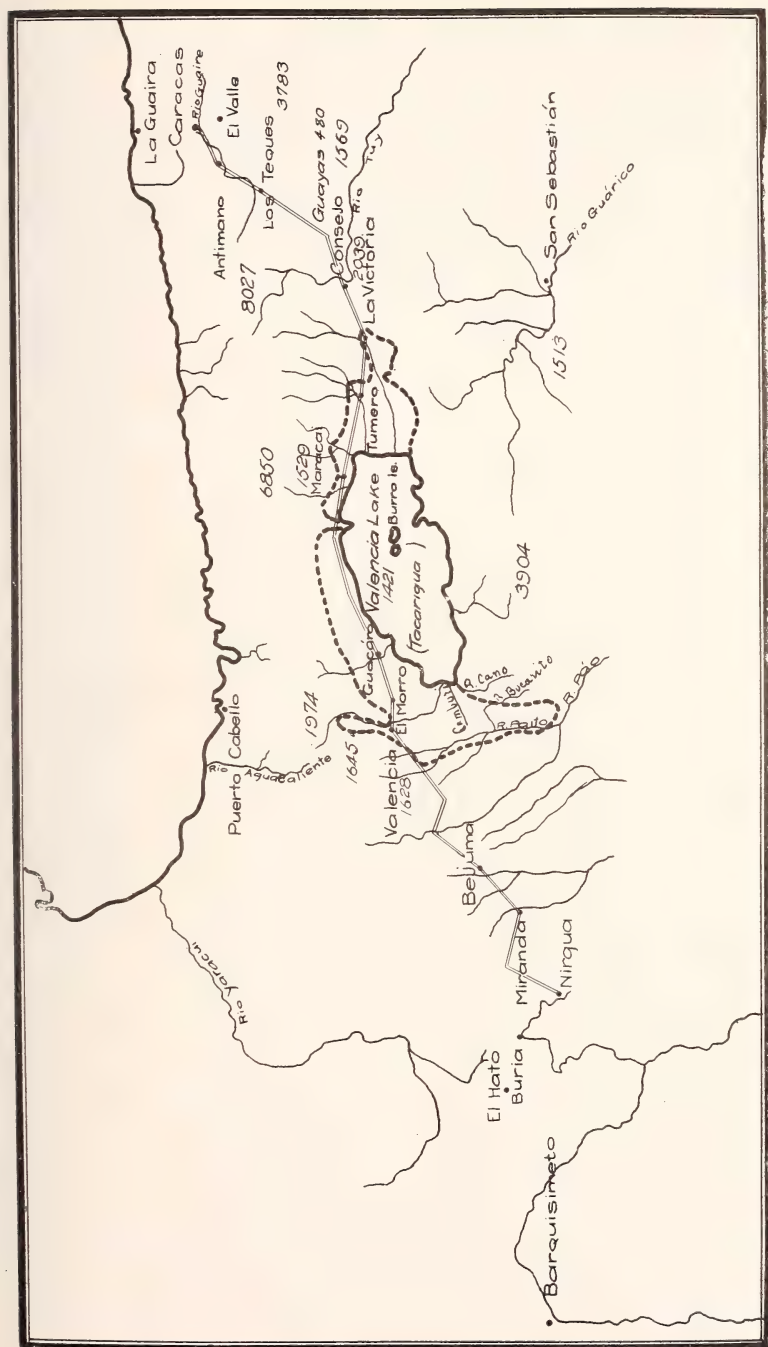


FIG. 1. Region about Lake Valencia. The broken line indicates the ancient maximum size of the lake.

heit der Einnahme von Holz constatirt habe, dass der Caño Camburi aus dem See herausflösse. Damit hätten wir also das Resultat, dass der See von Valencia und seine sämtlichen Zuflüsse zum Stromgebiete des Orinoco gehört haben, und es unterliegt keinem Zweifel, dass dies noch bis vor Kurzem der Fall gewesen ist. Nach Aussage des Hacendado Don Alejandro Llanos auf der Hacienda Siparo (El Progreso) floss der See etwa bis 1873 thatsächlich in den Caño Camburi nach dem Río Pao ab. Dagegen hat nun 1873 der Hacendado Amarado Munoz infolge der Ueberschwemmungen, die der Río Paito alljährlich in seinen Feldern anrichtete, denselben abgeleitet, so dass heutzutage der Río Paito an der sogenannten Loma de la Sabana de San Pablo entspringt, bis zu einem Punkte Las Araguatas fließt, dort sich theilt auf der südlichen Seite den Namen Río Paito beibehält, in seinem nördlichen Arm Río Canes heisst, sich mit diesem Arm bei Eglita wieder vereinigt und nun als Caño Camburi in den See von Valencia mündet. Seit 15 Jahren ist also die Existenz eines Binnenbeckens, das früher in den Orinoco abfloss, durch künstliche Eingriffe wieder hergestellt worden, indess soll zur Regenzeit immer noch ein Zusammenhang mit dem Río Pao existieren; die früheren Zuflüsse des Río Paito, der Guataparó und Tocuyito gehen jetzt in den Río Chirgua und dann erst in den Pao.

The fauna is poor. In all but 31 species were collected: Siluridae 4 species, Loricariidae 5, Callichthyidae 1, Characidae 14, Gymnotidae 1, Atherinidae 1, Poeciliidae 1, Symbranchidae 1, Cichlidae 2.

A list of the species with their general distribution follows:

C. Pimelodella metae Eigenmann.	Valencia basin.
C. Pimelodella tapatapæ sp. nov.	Valencia basin.
A. Rhamdia quelen Quoy and Gaimard.	Valencia and Tuy basins.
C. Rhamdia guairensis sp. nov.	Near Caracas.
C. Acanthurus brevifilis sp. nov.	Tuy basin.
A. V. Plecostomus plecostomus Linnaeus.	Valencia and Tuy basins.
C. Cochliodon plecostomoides Eigenmann.	Valencia basin.
C. Lasiancistrus mystacinus Kner.	Near Caracas.
C. Chaetostomus nudirostris Lütken.	Valencia.
C. Chaetostomus pearsei sp. nov.	Valencia and Tuy basins.
C. Chaetostomus guairensis Steind.	Valencia basin.
C. Farlowella acus (Kner)	Tuy basin.
B. Corydoras aeneus Gill.	Valencia basin.
A. Hoplias malabaricus (Bloch).	Valencia and Tuy basins.
B. Curimatus argenteus Gill.	Valencia and Tuy basins.
B. Odontostilbe pulcher (Gill).	Valencia basin.
¹ V. Hemigrammus marginatus Ellis.	Valencia basin.
E. Characidium catenatum Eigenmann.	Tuy basin and near Caracas.
C. Moenkhausia pittieri sp. nov.	Valencia and Tuy basins.
A. V. Astyanax bimaculatus (L.).	Valencia and Tuy basins.
C. Astyanax metae Eigenmann.	Valencia and Tuy basins.
B. Hemibrycon taeniurus (Gill).	Tuy basin.
C. V. Bryconamericus beta Eigenmann.	Tuy basin.
C. V. Gephyrocharax valencia sp. nov.	Valencia basin.

¹Southern Brazil, etc.

V. <i>Creagrutus beni</i> Eigenmann.	Valencia and Tuy basins.
D. <i>Roeboides dayii</i> Steindachner.	Tuy basin.
A. <i>Gymnotus carapo</i> Linnaeus.	Valencia basin.
C. <i>Menidia venezuelae</i> sp. nov.	Valencia basin.
B. V. <i>Lebistes reticulatus</i> (Peters).	Valencia basin.
A. V. <i>Symbranchus marmoratus</i> Bloch.	Valencia and Tuy basins.
C. V. <i>Crenicichla geayi</i> Pellegrin.	Valencia and Tuy basins.
B. V. <i>Aequidens pulcher</i> (Gill).	Valencia basin.

The species fall into a number of distinct groups according to their distribution. Six (marked A) are universally distributed species. Six (B) in addition to the universally distributed species are also found on the Island of Trinidad. The fauna of the Island of Trinidad has lost its isolation by the study of the Valencia and Rio Meta faunas. Sixteen (marked C) are peculiar to Venezuela about Valencia and the upper Rio Meta but all of these belong to widely distributed genera and they probably have a wider distribution than is now known. One species (D) is also found in the Rio Magdalena, and one (E) is found in the lowlands of British Guiana. Two species do not belong to any of these groups. Only ten of the species (marked V) were taken in Lake Valencia itself.

The lowland fauna is represented only by the universally distributed species and by *Roeboides*, *Characidium*, and *Moenkhausia*. The highland fauna consisting of *Pygidium* and *Astroblepus* is not represented in the collection.

ENUMERATION OF THE SPECIMENS

Siluridae

Pimelodella metae Eigenmann

"Vagre"

- 15088, F. Largest 100 mm. Maracay, Rio Bue, Valencia basin, July 29.
 15089, I. Rio Castaño, Valencia basin, July 27.

Pimelodella tapatapae sp. nov.

- 15094, I. Type 156 mm. Mouth of Rio Tapa Tapa, July 15, 1919.

Head 4.25; depth 5.4; D. 1.6; A. 8 to 8.5; adipose fin 2.8 in the length, its distance from the dorsal very little longer than the eyes; eye 4 in the head, 1.25 in the interorbital; teeth in the premaxillary in a band of uniform width; maxillary barbel reaching beyond the end of the adipose; outer mental barbel very nearly to ventrals; inner mental barbel slightly beyond origin of pectorals.

First dorsal ray (the spine) equal to the head without the opercle; upper caudal lobe narrower than lower, sharp pointed and a little shorter than the lower; anus but little nearer caudal than snout; pectoral spine equal to snout and eye, with over 20 short teeth on its posterior margin.

²Along the base of the Cordilleras from Bolivia to Caracas.

³The numbers refer to the collections of Indiana University.

Dorsal hyaline at base, dusky above the hyaline; a dark stripe from the snout to the caudal, widest and most diffuse on head, narrow and sharp on sides.

Resembling *Pimelodella metae* which has the upper caudal lobe much longer, the barbel shorter.

Rhamdia quelen Quoy and Gaimard

"Vagre"

15090, I. 167 and 198 mm. Rio Castaño, Maracay, July 27.

15092, I. 195 mm. Maracay Rio Bue, July 30.

15093, I. 278 mm. El Concejo, Rio Tiquirito, August 2.

Maxillary barbel to origin of adipose in the largest, 15093, I. to the last fifth of the adipose in 15092, a little beyond its origin in 15090.

Distance between dorsal and adipose 4 to 5 in the head; adipose 2.6 to 2.66 in the length.

Pectoral spine equals snout and eye.

Rhamdia guairensis sp. nov.

"Vagre"

Pimelodus humilis Günther, Cat. Fishes, v. 1864, p. 129

Venezuela

15091, I. Type, 132 mm. paratypes 5, 68 to 220 mm. Rio Guaire near Caracas, August 4.

Günther says of his *Pimelodus humilis*, "pectoral spine slightly serrated along both edges". In the specimens before me the pectoral spine is nearly smooth behind and has hooks along the anterior margin, the first one near its tip longer than the spine at its point of attachment. The hooks decreasing in size toward the base. There are other small differences but if it were not for the difference in the pectoral spine I should consider them as belonging to *humilis*.

Head 4 to 4.66; depth 6; D. 1.6; A. 11 to 13; distance between dorsal and adipose 1.33 to 1.66 in the head, $\frac{1}{2}$ to $\frac{2}{3}$ the length of the adipose; maxillary reaching to near tip of the ventral or not quite to its base; outer mental barbels to middle of pectorals; eye 2.5 in snout, 6 in head, 2.33 in interorbital; intermaxillary band of teeth slightly wider at the sides, with incipient backward projecting angle.

First dorsal ray about equal to snout and eye; caudal deeply forked; the lobes of about equal length, the lower a little the wider; anus a little nearer the eye than to the caudal; pectoral spine but little more than half the length of the fin, about equal to the snout in the young, .66 to .75 of the snout in the adult; anterior margin with about 9 hooks, very strong at the tip, gradually fading out to the base.

Dorsal with a narrow hyaline area above its base, beyond this the membranes are dark in their posterior half, light in the anterior, the dark becoming diffuse over the entire membrane toward the tip.

Loricariidae

Plecostomus plecostomus (L)

"Panaque"

15082, I. 1, Concejo, Rio Tuy, August 1, 1918.

15083, I. 3, Concejo, Rio Tiquirito, August 2, 1918. The smallest 23 mm.

15085, I. 1, Isla del Buro, July 12, 1918.

27+1 lateral plates, 15085 has the occipital bordered by three larger and three minute plates.

15086, I. 39 mm. Maracay, Rio Bue, July 20, 1918.

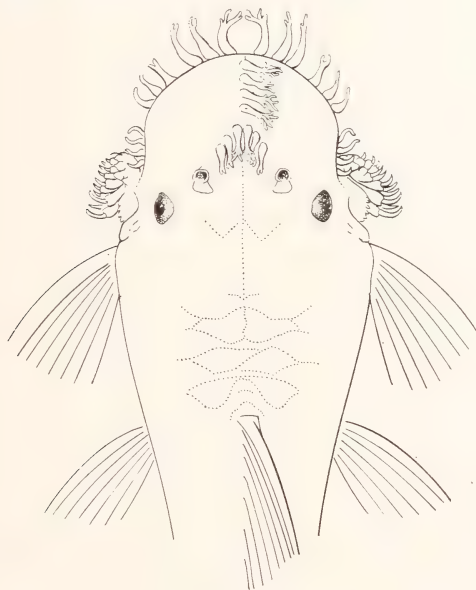
Cochlodon plecostomoides Eigenmann (Ms)

"Panaque"

15084, I. 1, Maracay, Rio Bue, July 29, 1918.

Lasiancistrus mystacinus Kner

Recorded from Caracas; no specimens secured.

FIG. 2. Top of head of *Ancistrus brevifilis* E. Type.***Ancistrus brevifilis* sp. nov.**

"Barbon"

15080, I. Type, 150 mm.; paratype 136 mm. male, paratype 100 mm. female;
El Concejo, Rio Tiquirito, August 2, 1918.

Distinguished by short tentacles, bifid or multifid on the snout.

Head 2.8 (2.66 in the male paratype); depth 5.25; D. 1.7; A. 1.4; plates 23+1; width of head 1.25 (2.4); in its length, its depth equal to half its length; eye 9 (8) in the head; interorbital 2.33 (2.6); mandibular ramus

3 (3.33) in interorbital; interopercle with 12 to 13 spines, the longest .2 the length of the head, naked portion of snout measured in the middle 2.5 to 2.66 in the length of the head; tentacles short, about equal to the length of the eye or shorter, those on the middle with from 2 to 10 very short branches at the tip; 5 plates and one median scute between the dorsal and the adipose, 11+1 between the anal and lower caudal ray; base of dorsal equal to its distance from the middle of the adipose spine; ventrals reaching past middle of anal, pectorals to the middle of the ventrals; depth of caudal peduncle 26 in its distance from the caudal.

Dorsal, caudal, ventrals and pectorals, each with four or five conspicuous, wavy bars; faint darker spots about the size of the eye in front of the dorsal, ventral surface uniform. In the female, the smaller paratype, the number of bands on the fins is smaller and they are less well marked; the naked margin of the snout is very narrow and without tentacles.

Chaetostomus nudirostris Lütken

Steindachner, Flussf. Südam II, 1881, p. 20, pl. v. fig. 2 notes on the type which has D. I, 7. (Valencia.)

No specimens were secured.

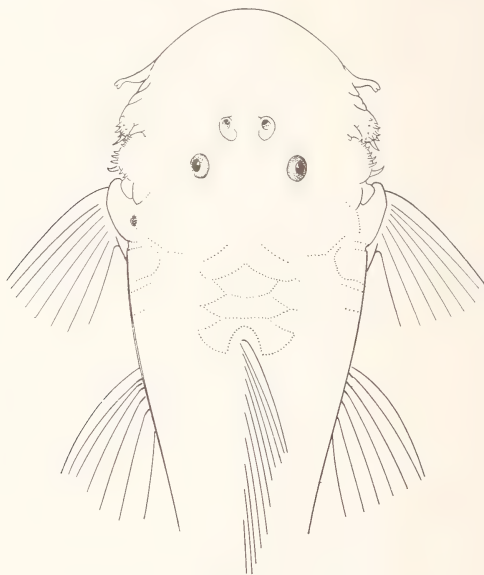


FIG. 3. Top of head of *Chaetostomus pearsei* E. Type.

Chaetostomus pearsei sp. nov.

"Coroncho"

15077, I. Type, 146 mm., paratypes, 3, 65 to 133 mm., Rio Castaño at Maracay, under rocks, July 16, 1918.

15078, I. Paratype 122 mm., Rio Tuy at El Concejo, August 1, 1918.

Head about 3; depth 6.5 to 7.5; D. I,9; A. I,4; 24+1 plates between the dorsal and the fulcrum of the adipose, 11 between the anal and the lower

caudal ray. Width of the head an orbital diameter less than its length, its depth at the eyes 2.5 in its length; interorbital 4 or nearly 4 in the length of the head; mandibular ramus equal to the interorbital; 5 to rarely 7 interopercular spines; naked part of snout extending about one third of the way to the posterior part of the eye.

None of the plates keeled; dorsal reaching the base or middle of the adipose spine; base of dorsal equal to snout and eye; lower caudal ray one or two orbital diameters shorter than the head; ventrals reaching to second third of the anal, pectorals about to middle of ventrals; ventrals rounded or angulated at the fourth ray from the outer.

Dark above with faint light dots, lower surface unspotted, fins dusky, a few faint light dots on the posterior dorsal rays; dorsal and caudal margined with light.

These were taken with:

***Chaetostomus guairensis* Steindachner**

Chaetostomus guairensis St. Flussf. Südam. II, p. 21, 1881, pl. III. fig. 1 and 1a. (Rio Guaire at Caracas.)

15079, I. one, 155 mm. Rio Castaño, at Maracay, July 16, 1918. D. I, 8.

***Farlowella acus* (Kner)**

"Aguja"

15081, I. 3 males and 4 females, El Concejo, Rio Tiquirito, August 2, 1918.

Callichthyidae

***Corydoras aeneus* Gill**

15087, I. Maracay, Rio Bue, July 19, 20, and 29.

Erythrinidae

***Hoplias malabaricus* (Bloch)**

"Guabina"

15106, I. Rio Tiquirito, El Concejo, August 1.

15107, I. Rio Tuy, El Concejo, August 1.

15108, I. Isla del Buro, Lake Valencia, July 9 and 10.

15109, I. Maracay, Rio Bue, July 19.

Characidae

Curimatinae

***Curimatus argenteus* (Gill)**

"Cula"

15110, I. El Concejo, Rio Tiquirito, August 1.

15111, I. Maracay, Rio Bue.

Cheirodontinae

***Odontostilbe pulcher* (Gill)**

"Sardina"

15126, I. Maracay, Rio Bue, July 19 and 29.

Nannostomatinae

Characidium catenatum Eigenmann

"Majuca"

15143, I. Rio Guaire, near Caracas, August 4, 1918

15142, I. Concejo, Rio Tuy, August 1, 1918.

Tetragonopterinae

Hemigrammus marginatus Ellis

"Sardina"

15127, I. Maracay, Rio Bue, July 29.

15128, I. Isla del Buro, July 11.

These specimens differ from those in Paraguay and southern Brazil in having not more than one maxillary tooth. The caudal margin or submargin is intensely black, the tip in some specimens light.

Moenkhausia pittieri sp. nov.

"Sardina"

15136, I. Type 58 mm. 27 paratype, 33 to 60 mm. Concejo, Rio Tiquirito, August 1.

15137, I. Paratype, 45 mm. Maracay, Rio Bue, July 28.

Head 4: depth 2.16 to 2.5; D. 11; A. 26 to 29; scales 7-35-6; eye 2.5 equals interorbital.

Deep, compressed, ventral profile regularly arched from chin to end of anal, dorsal profile slightly depressed over the eye; preventral area narrowly rounded, postventral area narrowly compressed; predorsal area narrowly keeled, with a median series of slightly notched scales near the dorsal and lateral scales with their edge bent over the middle further forward.

Occipital process equals one-fourth the distance from its base to the dorsal, bordered by three scales; fontanels rather broad, the frontal fontanel about three-fourths as long as the parietal without its groove; suborbital with a strongly convex margin, the naked area of the cheek increasing in width from the angle of the suborbital forward; maxillary a little less than 3 in the head, mandible very little more than 2; four or five teeth in the outer series of the premaxillary, five in the inner series, three or four in the maxillary; five teeth of nearly equal size (the last sometimes considerably smaller) in each ramus of the mandible, abruptly smaller teeth on its side.

5+8 gill rakers.

Scales regularly imbricate, lateral line but little decurved; anal with a sheath of a few scales along the base of its anterior third or fourth; caudal lobes with but few small scales along the outer part of their basal fourth. Scales with but few divergent striae.

Fins all large; origin of dorsal equidistant from snout and tip of adipose or caudal, the third, fourth, and fifth rays highest, reaching to the adipose or the caudal; adipose fin well developed; caudal lobes 2.75 to 3.25 in the length; anal high, with a distinct lobe in front, the fifth to the seventh ray highest, reaching to the base of the fifth to sixth ray from the last, origin of anal about equidistant from the caudal and the middle

of the eye; ventrals prolonged, reaching in extreme cases to the twelfth anal ray; pectorals about equal to the length of the head.

No caudal or humeral spots, a narrow lateral band; dorsal, ventrals, and anal dusky.

In general appearance this species resembles Fowlerina but lacks a predorsal spine. None of the specimens have hooklets on the anal rays usually found on mature males of this genus.

Vertebrae 13+17.

Alimentary canal containing fragments of insects.

***Astyanax bimaculatus* (L)**

"Sardina palate"

15112, I. Maracay, Rio Bue, July 29, 1918.

15113, I. Mouth of Rio Tapa Tapa, July 15.

15114, I. Rio Castaño, July 16 and 27.

15116, I. Isla del Buro, Lake Valencia, July 11.

15117, I. Rio Bue, July 18.

15118 and 15119, I. Rio Tiquirito, Concejo, August 1.

***Astyanax metae* Eigenmann**

"Sardina ravo de candelá"

15120, I. Rio Castaño, July 16 and 27.

15121, I. Rio Bue.

15122, I. Concejo, Rio Tiquirito and Rio Tuy, August 1.

15123, I. Mouth of Rio Tapa Tapa, July 15.

The dark area from anal to caudal spot inconspicuous or absent.

***Hemibrycon taeniurus* Gill**

"Sardina"

15138, I. Concejo, Rio Tuy, August 1.

15139, I. Concejo, Rio Tiquirito, August 1.

Eye equals interorbital or but slightly less; head 4.38 to 4.6; anal with a narrow black line just within the margin and across the lobe at the base of its distal third. Tips of first anal rays milk white; caudal in the male without squamous pouch; five or six teeth in the front row of the premaxillary, the first and last antrorse.

***Bryconamericus beta* Eigenmann,**

"Sardina"

15140, I. Concejo, Rio Tiquirito, August 1.

***Bryconamericus* sp. ?**

15141, I. one 43 mm. Isla del Buro, July 11.

A. 30; lat. l. about 36; one maxillary tooth; maxillary little shorter than eye; interorbital slightly larger than eye.

Glandulocaudinae

***Gephyrocharax valencia* sp. nov.**

"Sardina"

15129, I. Paratypes. Isla del Buro, Lake Valencia, July 11.

15130, I. Two paratypes, Maracay, Rio Bue, July 19.

15131, I. Type and 3 paratypes, Maracay, Lake Valencia off dock of Paper Mill.

The genus *Gephyrocharax* has hitherto been known from five species, *G. melanocheir* from the Magdalena between Honda and the coast, *G. caucanus*, in the Cauca basin between Cartago and Cali, *G. chocoensis* from the San Juan and the Atrato basins, *G. atricaudata* from the Panama Canal Zone, and *G. intermedius* from Panama. The present species reaches a length of about 45 mm.

Head 4.33; depth 3.33 to 3.66; D. 9; A. 30 to 32. Scales 5 to 6.5-40 to 42-5; eye longer than snout, 3 in the head, slightly less than inter-orbital.

Very similar to *G. chocoensis* and *G. melanocheir*, the pectoral in the male not black tipped, the shoulder without a vertical bar; the frontal fontanel extending to the ethmoid.

Creagrutus beni Eigenmann

"Sardinas"

15124, I. Rio Guaire near Caracas, August 1.

15125, I. El Concejo, Rio Tiquirito, August 1.

15133, I. Maracay, Rio Bue, July 19.

15134, I. Isla del Buro, July 11.

15133 and 15134 are small specimens, mostly between 30 and 40 mm. These have a dark wedge entering the middle of the dorsal from in front. This spot is much less conspicuous and may be absent in the adult. Some of the smaller have a conspicuous humeral spot and a small caudal spot.

Characinae

Roeboides dayii Steindachner

"Sardina"

15132, I. El Concejo, Rio Tiquirito, August 1, 1918.

D. 49; scales 61 and 62. Shoulder spot small and inconspicuous.

It is possible that this will form another of the "statistical" species of the genus *Roeboides*. There are several such west of the Eastern Andes of Colombia. There being but one specimen available for examination, the determination of its closer affinities may be left in abeyance.

Gymnotidae

Gymnotus carapo Linnaeus

"(L?) amprea"

15095, I. Maracay, Rio Bue, July 20.

Atherinidae

Menidia venezuelae sp. nov.

75144, I., 15, largest 61 mm. Rio Tapa Tapa, July 15, 1918.

Head 3.8 to 4.2; depth 5.66 to 6.33; D. IV or V, 8 to 10; A. 20 to 22; scales 40 to 45; eye about equal to the snout, 3-3.2 in the head, interorbital 4; snout freely protractile.

Upper profile straight to the tip of the premaxillary, mandible strongly inclined upward, gape short, reaching about halfway to the eye; teeth in two to four feeble series, no canines; about 17 rakers on the lower arch; depth of caudal peduncle 2 in its length.

Scales entire; dorsal and anal naked.

Origin of spinous dorsal above a point between the anus and anal, a little nearer tip of snout than tip of caudal lobe; origin of second dorsal a little behind the middle of the anal, the base of its last ray over the anal; caudal equal to the length of the head, pectorals equal to the length of the head without the opercle; origin of ventrals a little nearer snout than base of last anal ray.

A lateral band on the fifth and part of the sixth scale below the dorsal, otherwise translucent?

Poeciliidae

Lebistes reticulatus (Peters)

- 15145, I. Sewer ditch, Maracay, July 14.
- 15146, I. Rio Castaño, July 27.
- 15147, I. Isla del Buro, July 11.
- 15148, I. Maracay, Lake Valencia, July 25.
- 15149, I. Maracay, Rio Bue, July 19.

Symbranchidae

Symbranchus marmoratus Bloch

"Anguilla"

- 15096, I. Isla del Buro, July 9 and 12. Rocks on shore of Lake Valencia. Mud at depth of 15 m. July 18; one from stomach of Guabina, July 22.
- 15097, I. Rio Guaire near Caracas, August 4.
- 15098, I. Little stream by Agricultural Station, Caracas. Dr. Pittier.
- 15099, I. 35 mm. Mud behind rushes. Maracay, July 25.

Cichlidae

Crenicichla geayi Pellegrin

"Mataguaro"

- 15100, I. Concejo, Rio Tiquirito, August 1 and 2.
- 15101, I. Isla del Buro, July 9 and 11.
- 15103, I. Maracay, Rio Bue, July 29.
- 15102, I. Rio Castaño, July 27.

Aequidens pulcher (Gill)

"Chusco"

- 15104, I. Isla del Buro, Lake Valencia, July 10.
- 15105, I. Maracay, Rio Bue, July 19 and 29.

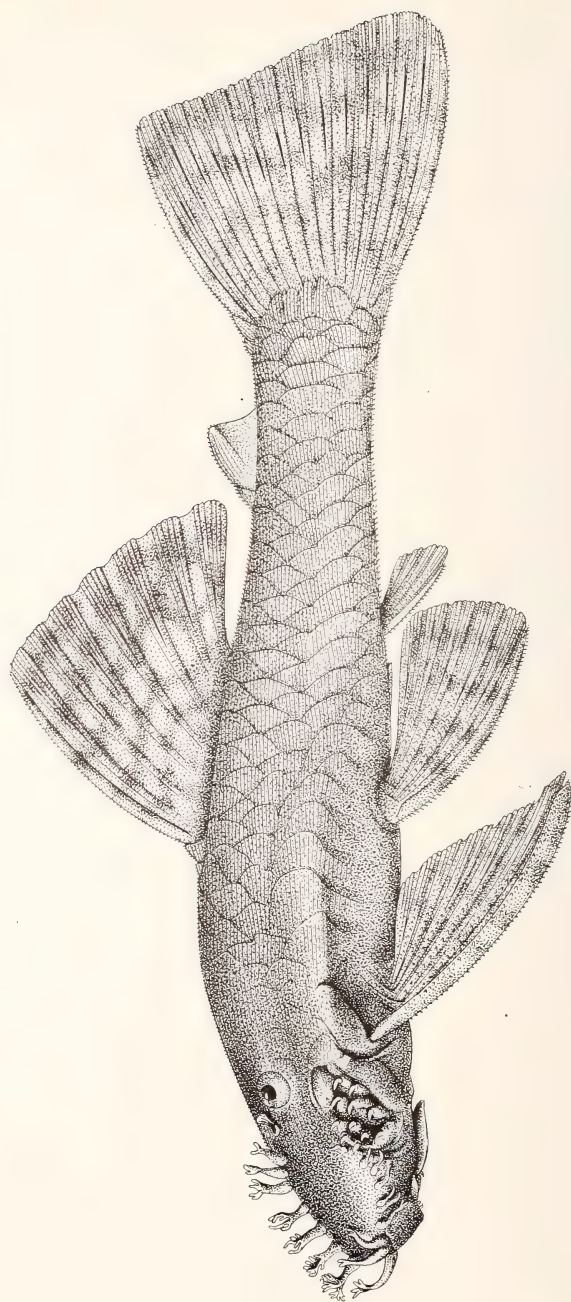


PLATE I. *Ancistrus brevifilis* Eigenmann. Type No. 15080, I. U. M. El Concejo.

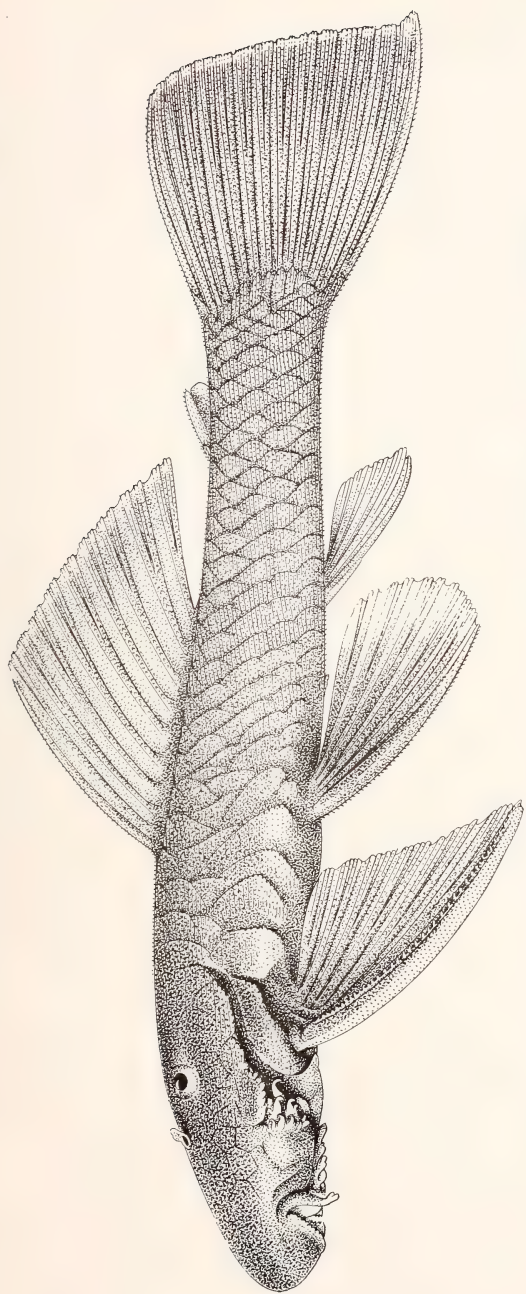
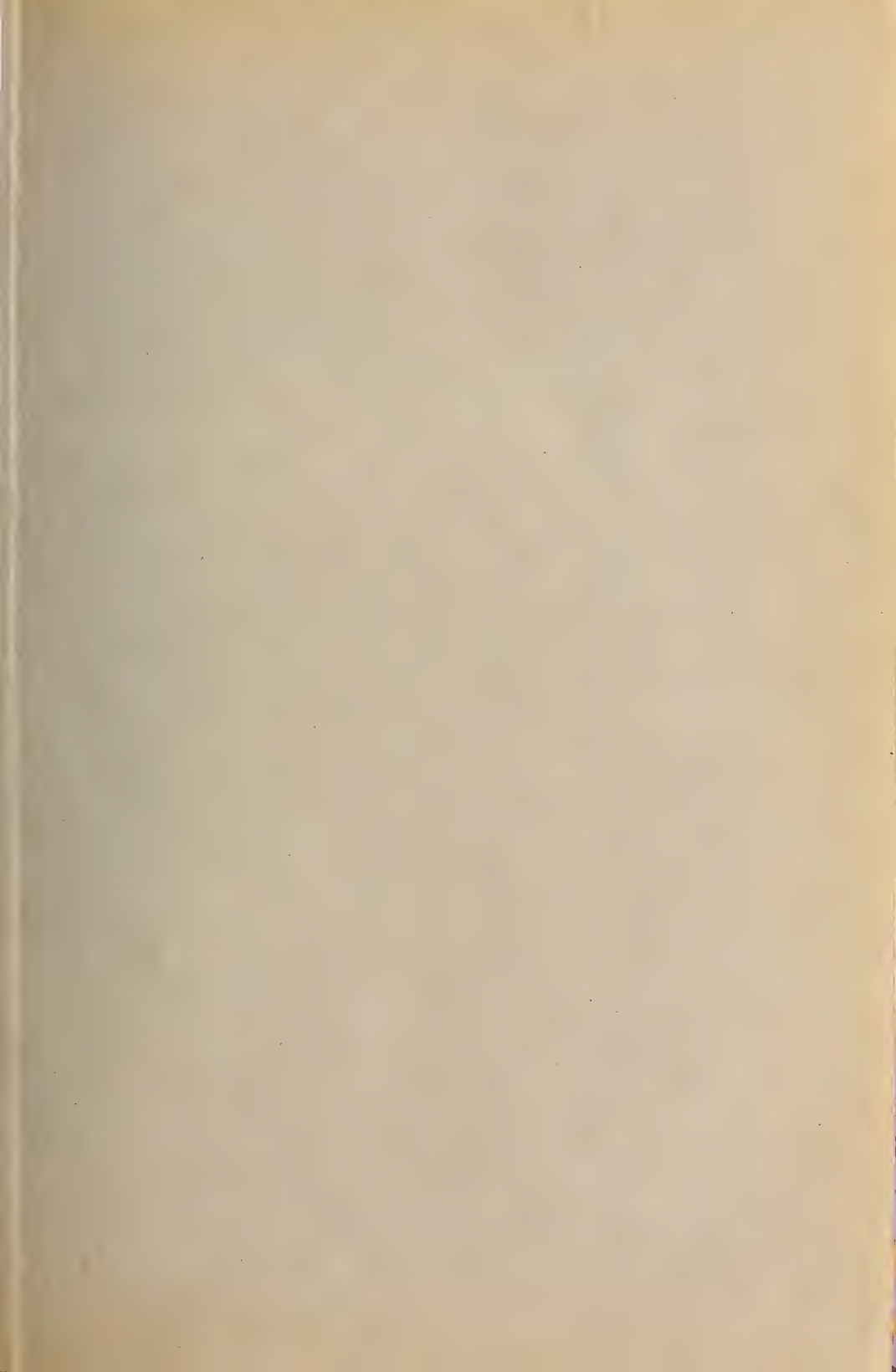
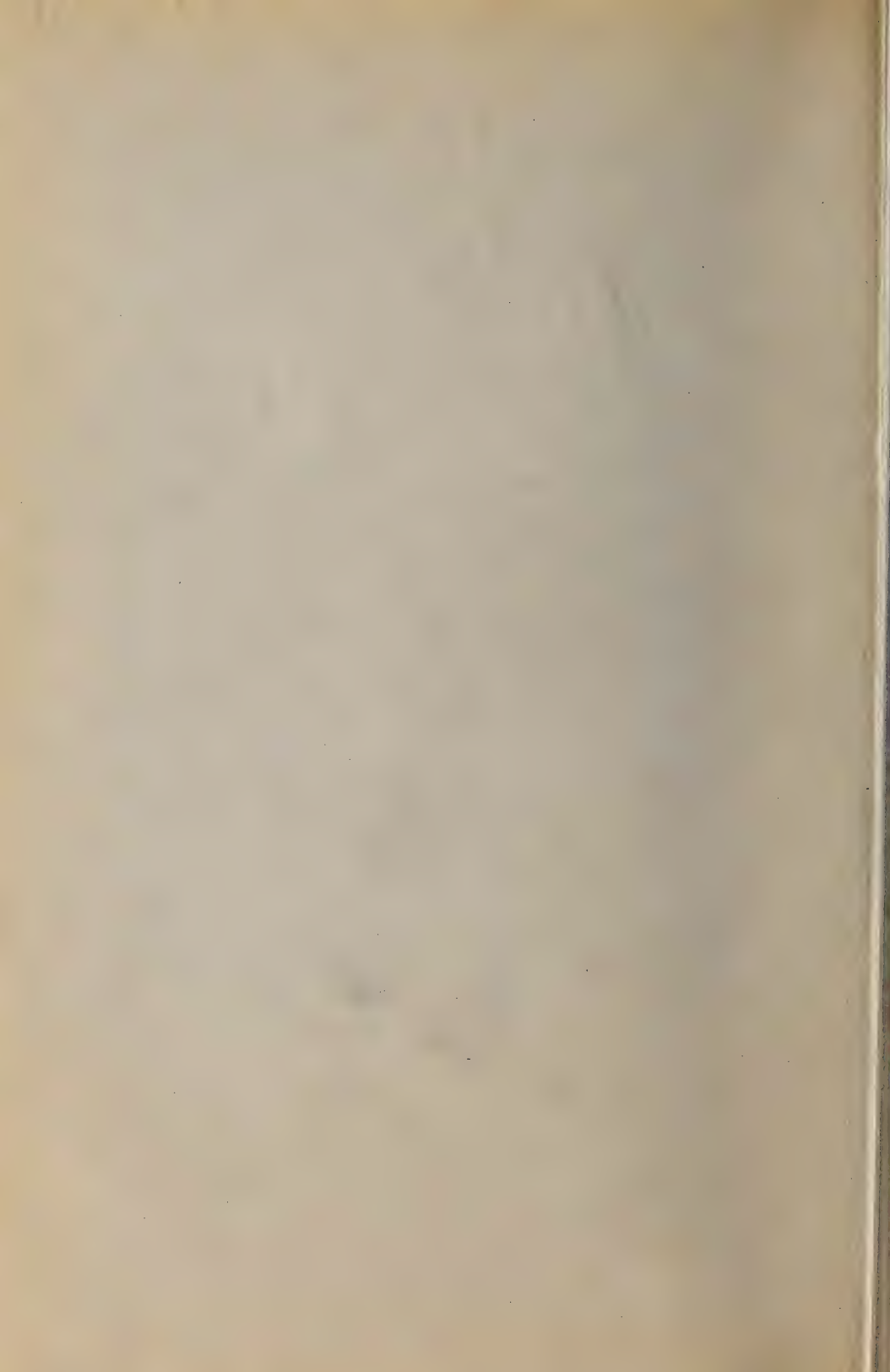


PLATE II. *Chatostomus pearsei* Eigenmann. Type No. 15077. I. U. M. Maracay.

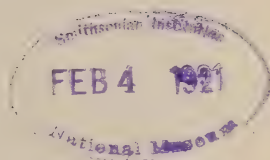


PLATE III. *Moenkhausia pittieri* Eigenmann. Type, No. 15136, I. U. M. Rio Tiquirito.





INDIANA UNIVERSITY STUDIES



Study No. 45

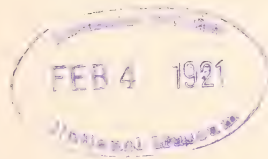
SOUTH AMERICA WEST OF THE MARACAIBO, ORINOCO, AMAZON, AND TITICACA BASINS, AND THE HORIZONTAL DISTRIBUTION OF ITS FRESH-WATER FISHES. By CARL H. EIGENMANN, Dean of the Graduate School, and Head of the Department of Zoölogy in Indiana University.

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

Study No. 45

SOUTH AMERICA WEST OF THE MARACAIBO, ORINOCO, AMAZON, AND TITICACA BASINS, AND THE HORIZONTAL DISTRIBUTION OF ITS FRESH-WATER FISHES. By CARL H. EIGENMANN, Dean of the Graduate School, and Head of the Department of Zoölogy in Indiana University.



Prefatory Note

The present study is a continuation of *Indiana University Studies* Nos. 16, 18, 19, 20, 23, 24, and 25. It presents a summary of an examination of the fresh-water fishes of South America west of the Andes of Bogota and of the Pacific slope of Ecuador and Peru. Other chapters giving summaries and conclusions are appearing in various scientific journals. A fully illustrated monograph is ready for the printer.

The material on which these studies are based consists of collections made during the following expeditions:

1. A "Reconnaissance of Colombia" during January, February, March, and part of April, 1912, by C. H. Eigenmann. A series of collections was made from Cartagena on the northern coast up the Magdalena to Girardot and up to Bogota, between Bogota, Ibagué, Cartago, Cali, to Buenaventura on the Pacific Ocean, thence up the San Juan and down the Atrato to Rio Sucio and back to Cartagena. These collections were supplemented by others collected by Manuel Gonzales who was a member of the expedition. He collected particularly between Bogota and Honda, Bogota and San Gil, and Bogota and Barrigon, respectively, west, north, and east of Bogota.

2. "The Landon-Fisher Expedition to Colombia" by Arthur Henn and Charles Wilson.

They collected particularly in the Rio Telembi of the Rio Patia basin. Later Mr. Wilson collected in the upper San Juan, in the Rio Atrato, and the Rio Truando of the Atrato basin during January, February, and March of 1913.

3. "The Landon Ecuadorian Expedition" by Mr. Henn.

Mr. Henn after separating from Mr. Wilson spent the rest of 1913 and part of 1914 in exploring some of the headwaters of the Rio Patia, the lower courses of the Rio San Juan, in Colombia and the Chone, Portoviejo and Guayas basins in Ecuador, and in the highland of Ecuador.

4. "The Irwin Expedition to Peru, Bolivia, and Chili" by C. H. and Adele Eigenmann and Wm. Ray Allen. Only a small part of the material of this expedition pertains to these studies. Collections were made in 1918 and 1919 in the Chira, Piura, Jequetepeque, Rimac, and Chili rivers in Peru.

5. "The University of Michigan Expedition to Santa Marta." The collections of this expedition were lent me for study by Dr. A. G. Ruthven of the Museum of the University of Michigan.

6. Various collections were received from Colombia, made under the inspiration of Hermano Apolinar Maria, Director of the Museum of the Instituto de la Salle at Bogota.

7. The extensive collections made and reported upon by the late Seth E. Meek and S. F. Hildebrand for the Smithsonian Institution and the Field Museum.

The types and first series of the first two expeditions and the second series of the Landon Ecuadorian Expedition are in the Carnegie Museum, the types and first series of the third, fourth, and sixth expeditions and the second series of the first two expeditions are in the collections of Indiana University.

Special acknowledgments are due to Mr. Hugh McK. Landon, Mr. Carl G. Fisher, and Mr. Will Irwin for providing in large part for the expeditions bearing their names, and to Mr. Arthur Henn, Mr. Charles Wilson, Mr. Arthur Bierhaus, Dr. William Ray Allen, and Miss Adele Eigenmann, volunteer workers during the various expeditions.

Some of the questions concerning the distribution of freshwater fishes in this area are:

1. What fishes are found west of the Cordillera of Bogota and on the Pacific slope of Ecuador and Peru?

2. Where did the ancestors of the present fauna come from?

3. Is the transandean fauna a unit?

4. How, where, and when did the fishes get into the Magdalena and Guayas rivers?

5. What types of fishes are found in the Chagres river?

6. How and when did the fishes reach the Chagres?

7. How did those that succeeded in getting into the Chagres succeed in their migration northward or southward?

8. What types of fishes are found in the Pacific slope rivers between Panama and Peru?

9. What relation do the fishes of the Atrato and San Juan bear to each other?

Some of these questions were well formulated before I began my work. Others have suggested themselves as the work progressed. All of them receive full consideration in the volume

just completed. They are also treated in the series of articles going thru the press of various journals.

Many of the species recognized were new to science and are for the most part figured in the forthcoming volume. It was found that the ancestors of the present fauna came in small part from Central America, in small part from the ocean, in large part it had a common origin with the fauna of the present Orinoco and Amazon basins. The ancient fauna of South America, extending from ocean to ocean, was divided by the formation of the Andes which arose as a screen, dividing the ancient fauna into cis-Andean and trans-Andean sections. Since the Andes have become an effective barrier against the cis-Andean and trans-Andean migrations, the parts of the ancient fauna have undergone an independent evolution resulting in many genera and species peculiar to the various rivers.¹ A study of the migrations and interrelations of the different river faunas shows that the fauna of the Guayas and the region south was separated from the Amazon, the fauna of the Magdalena from the Orinoco, and that the Guayas and Magdalena have had little or no intermigration.² The present fauna of western Peru north of the Rimac is a relict of the Guayas fauna; south of the Rimac, in part at least, of the Chilean fauna. The Chagres fauna has come in part from the north and in part from the south (the Atrato via the Tuyra and Chepo), chiefly during the lifetime of its present species. The Atrato-San Juan valley has been used as a highway between the Atlantic and Pacific drainage, but to a limited extent. The fishes of the San Juan and Atrato, separated by a very narrow divide, a little over 300 feet above sea level, differ from each other more than the faunas of the Paraguay and Amazon.

These and other questions are considered in detail in the special articles of which the present study forms a part.

¹It is probable that at least the genera peculiar to the west and of wide distribution north and south antedate the formation of the Andes.

²The present Magdalena fishes show a much closer relationship to the fauna east of the Andes than does the fauna of western Ecuador. Many species are still identical on the two sides of the Cordillera of Bogota, making it seem certain that the specific markings of these species are older than the Andes, unless a road around the north remained open after the Andes became an effective barrier.

South America West of the Maracaibo, Orinoco, Amazon, and Titicaca Basins, and the Horizontal Distribution of Its Fresh-Water Fishes

By CARL H. EIGENMANN, Dean of the Graduate School, and Head
of the Department of Zoölogy in Indiana University

Physical features. The Pacific slope of South America, 4,000 miles long, rarely over 100 miles wide, resembles a veritable shoe-string in shape. Conditions in this area vary from extreme wet to extreme dry, from wet tropical to dry temperate and wet temperate and cold as one goes south from Panama to Cape Horn.

The rainfall in the Canal Zone exceeds 200 inches per annum; in Buenaventura it is said to be between 250 and 400 inches per year. This condition prevails to the Rio Esmeraldas in Ecuador (Veatch, *Quito to Bogota*, p. 163). South of the Esmeraldas the country becomes more and more arid. On the coasts of Peru and of Chili south to Copiapo the rainfall is negligible; it does not average one inch per annum. In Peru all of the water for agriculture is derived from the rivers descending from the mountains, and in a portion of Chili, between the Loa and Copiapo, even this source fails. In Serena, central Chili, the annual amount has ranged from about 2 to 8.5 inches per annum between 1869 and 1910; in Santiago between 4 and 31 inches; the latter a great extreme in one of the years between 1873 and 1910. In Concepcion the rainfall has been between 26.6 and 40 inches during the period 1876 to 1910, in Valdivia between 73 and 143 inches in 1872 to 1910, and at Puerto Montt between 71 and 128 inches.

The amount of rainfall also varies very greatly with the altitude at any cross-section. Behind the coast range there are local dry areas even in the wet regions of Colombia. The upper Dagua river runs thru such a rain shadow between Caldas and Cisneros, and the upper Cauca runs in the shadow of the western Cordillera, and is comparatively arid.

Thruout Peru, Ecuador, and Colombia there are two main chains of the Andes, the maritime, or western Cordilleras, extending from near Girardot to Cape Horn, and east of these the older of the two called the White in Peru, Oriental in Ecuador, and Central in Colombia.

Peru. The physical features of western Peru are very simple. The crests of the western Cordilleras form the divide between the Titicaca or Atlantic and the Pacific slope drainage. The crest has an elevation of over 14,000 feet everywhere except inland from Paita. Here a dip in the crest has an elevation of only 6,700 feet.¹

In Peru the Pacific slope is drained by a large number of rivers rising in the western Andes. After a comparatively short and very swift course they either empty into the ocean, or are lost in the sands near the coast, or are more or less exhausted in irrigation projects. Only one of the rivers has a north and south trend for any considerable distance. This is the Rio Santa in central Peru, which, in its upper course, flows between two chains of the western Cordilleras.

All of the rivers have a very great seasonal fluctuation. The maximum flow in all the rivers occurs in March, the minimum in late summer.

The stretches between successive rivers on the Pacific slope of Peru are, in most cases, bone dry deserts, or masses of mountains, into which the rivers have cut deep gorges. These conditions have mitigated against the ready intermigration of fishes.

The Vitor river, in southern Peru, for instance, rises in an upland meadow (over 14,000 feet), flows thru a region of volcanic ash, and has, in its middle course, a valley (Vitor Valle) about a mile wide, cultivated to vines, figs, small fruits, and grain. Then it falls to a lower level, near the coast, where there is another valley. Looking from the hills about Yura, near Arequipa, toward the ocean, the land is a billowy mass of arid, sand-drifted mountains and plains, with nothing green visible anywhere.

The Rimac has a somewhat different course. The Rimac and its tributaries rise in small glacial lakes with elevations of about 15,000 to 16,000 feet. They are, in part at least, inhabit-

¹Enock (*Peru*, 1910, p. 11) says:

"The traveller who enters the interior of Peru from the Pacific Coast must invariably cross the Andes at an altitude of 14,000 feet or more, for the passes of the main Cordillera all reach this elevation. There is one exception, in the northerly part of the country, towards the frontier of Ecuador, where a low gap exists in the Andes, of some 6,700 feet elevation; but this is the only exception in thousands of miles of continuous mountain chain."

ed by an Orestias. Then there is a descent of a few thousand feet, with very swift water, not suitable for fishes, where we found nothing. Within this belt streams are clear in the morning; in the afternoon the melting of frozen ground rolls down thin mud in which nothing can live.

Between Rio Blanco and Lima, a distance in a straight line of less than 50 miles, the river has a fall of over 9,000 feet. At Chosica it has an annual fluctuation between a minimum of 10 cubic meters per second, in September, and a maximum of 115 cubic meters per second, in March.

The Jequetepeque in northern Peru, with a total length of about 75 miles, has a more gentle slope than the Rimac, having a minimum flow of about 5 cubic meters per second in September and a maximum of 220 in March.

The Piura river, at Piura, is reduced during the dry season to a few stagnant pools in which the fishes become greatly concentrated. They starve, but some of them succeed in living thru the dry season.

In southern Peru the interandean region is occupied by Lake Titicaca. In northern Peru it is drained by longitudinal rivers which, in the north, turn eastward and empty into the Atlantic. As stated above, thru the whole of Peru, and northward to the Tumbes, the divide between the Pacific and eastern drainage follows the crest of the western Cordilleras.

Ecuador. In Ecuador the crests of the two main chains of the Cordilleras are but a few miles apart and are joined by cross ridges, in part old lava fields, which divide the area between them into a series of highland parks, 6,000 to 10,000 feet high. Some of the parks drain into the Pacific, others into the Atlantic. The continental divide thus lies along the crest of the eastern chain from Popayan in southern Colombia as far as Cotopaxi in northern Ecuador. It then shifts westward to the crest of the western Cordilleras, then to the eastern Cordilleras again, then to the western again, to the eastern once more, finally shifting to the western crests, where it remains, thru all of Peru to southern Chili.

It may be questioned whether the northern parks of Ecuador are drained into the Pacific because the heavy rainfall has enabled the Patia and the tributaries of the Esmeraldas to cut back thru the western Cordilleras and thus to annex the interandean streams,² or whether the present trend of these interandean rivers

²Both north and south of this area the interandean parks drain into the Atlantic.

is due to the late formation of the Cordillera of Bogota which in southern Colombia and northern Ecuador are piled up against the Cordillera Oriental. In the center and south of Ecuador others of the interandean parks are tapped by Pacific slope rivers, the Tumbez, Rompida, Canar, Can Chan, and Chimbo.

The Rio Patia in southern Colombia rises near Popayan, flows between the eastern and western Cordilleras southwestward to about 90 miles north of the Equator, then breaks thru the western Cordilleras and flows northwestward to empty into the Pacific near Tumaco. A large southern tributary, the Guaitara, rises between the two Cordilleras, 45 miles north of the Equator, and flows between them to join the Patia, where it bends from a southwest to a northwest flow.

The Rio Mira, with a length of about 100 miles, flows northwest, emptying into the Pacific at the northern border of Ecuador.

The Esmeraldas, with a general trend nearly parallel to that of the Mira, drains the parks about Quito and empties into the Pacific approximately 60 miles southwest of the mouth of the Mira, at 1° north.

The rivers emptying directly into the Pacific between the Esmeraldas and the Guayas are all small, the largest of them, the Rio de Chone and the Rio de Portoviejo, are less than 40 miles long, measuring from source to mouth. South of Portoviejo the country is dry and the rivers are shorter still. In the area between Cuenca and the coast, the Atlantic slope streams, tributaries of the Amazon, rise within about 35 miles of the Pacific coast.

Wolf and Sievers make out that between Esmeraldas and Guayaquil, coastal Cordilleras reach a height in places of 2,300 feet. In the north, about Esmeraldas and Manabi, they are of late tertiary and quarternary. Southward about Portoviejo they consist of older formations. The youngest land of Ecuador lies between the coast Cordilleras and the western Cordilleras. Even as late as quarternary time the Guayas basin was a gulf reaching from Machala to the base of the Cordilleras. This gulf has been largely filled by debris to form the present Guayas basin. The chalk mountains of the coastal Cordilleras reach a height of about 600 to 1,000 feet. The quarternary rolling land has an elevation of 60 to 250 feet. Between the coastal Cordilleras and the western Cordilleras there are a number of characteristically lowland streams with a north and south trend.

Sievers, from whose *Süd und Mittelamerika* the above account is taken, p. 459, says:

"Infolge der Flachheit des quartären Landes ist es für flache Fahrzeuge möglich, vom oberen Daule in einen der zuflüsse des Esmeraldas, Quinde, zu gelangen. Der Esmeraldas wird aus dem Rio Toachi, dem Rio Blanco und dem Guailabamba gebildet, hat also seine Quellen tief in der Cordillere am Iliniza und Cotopaxi. Alle drei fliessen in oft wechselnden Betten als charakteristische Tieflandsflüsse durch die Ebene, sind aber Querströme, die genötigt werden, in engem, schluchtartigem Tale mit senkrechten Wänden durch die Küstenkette hindurchzubrechen, so dass der wasserreiche gemeinsame Unterlauf für die Schifffahrt unbrauchbar ist."

The southern part of the former gulf is drained thru the Vines, Caracol, Chimbo, and Barranca Alta into the southward-flowing Guayas, an extension of the Rio Vines. Paralleling the Vines, the Daule drains the area west of it to within about 30 miles of the coast.

Colombia. In Colombia conditions are complicated. The western Andes of Ecuador are continued thru the whole of Colombia to Cartagena.

The eastern Andes, as the Cordillera Central, are also continued thru the whole of Colombia to Santa Marta, but are cut in two by a great fault valley occupied by the valley of the lower Cauca and lower Magdalena.

The two chains coalesce near Medellin in central Colombia. South of Popayan the valley between the two old chains of the Cordilleras is drained by the Patia into the Pacific. North of Popayan it is drained by the Rio Cauca, which starts in the high interandean plateau about Popayan, flows to Cartago, where it begins a turbulent course thru the "knot" of the western and central Cordilleras to Caceres, from where it flows more gently to the Magdalena at a point where, in former times, it probably emptied into a bay similar to the present Lake Maracaibo.

The complications in Colombia are due to the formation of two younger chains of Cordilleras. One of these is the Cordillera Oriental of Colombia or the Cordillera de Bogota.

The Cordillera of Bogota and the plains of Bogota have been studied by Hettner ("Die Cordillere von Bogota," *Ergänzhft. No. 104 zu Petermanns Mittheilungen*, 1892). He finds that the Cordillera of Bogota begins between latitude 1° and 2° north, as low hills, joined onto the eastern Cordillera of Ecuador. These hills are cut thru by the tributaries of the Amazon flowing from the eastern Cordilleras. They gain in height at 2° and are no longer

crossed by streams. The upper Magdalena has cut into these Cordilleras lengthwise so that it runs between two of its chains north as far as Honda. At Honda the Magdalena cuts thru the westernmost chain of the Cordillera of Bogota and flows into the depression (fault?) between the central Cordillera and the Cordillera of Bogota. Towards the north the Cordillera widens and then divides into several chains separated by plains. The westernmost one of these is the Sierra de Perija, which extends to the Sierra Nevada de Santa Marta. The middle chains are replaced on the north by Lake Maracaibo, the eastern largest one becomes the Cordillera of Merida, which ends at the depression of Barquisimeto beyond which are the Caribbean mountains, the coast Cordilleras of Venezuela.

The Cordillera of Bogota, aside from a few quarternary deposits laid down after the formation of the Andes, consists probably entirely of cretaceous sedimentary rocks. The youngest rocks, the Guaduas layers, may be tertiary. A few rocks older than the cretaceous are the half crystalline blue and green slates with quartzite and quartzitic conglomerate seen near Quetame. The southern part of the Cordillera of Bogota are simple erect, or slightly inclined, mountain folds, comparable to the Jura. The westernmost ones consist of the Guaduas layers and are the youngest. During the entire cretaceous, and perhaps part of the tertiary, it was submerged. The formation of the mountains probably began in the tertiary and did not produce notable modification in the quarternary.

The fourth of the Cordilleras of Colombia is the coast Cordillera. This is the youngest of the great mountain chains of Colombia. It has also been studied by Hettner,³ and I cannot do better than present an abstract of this paper.

The coast Cordillera begins at the bay of Buenaventura and extends thru more than three degrees to the slight depression of the Truando which separates it from the mountains of Darien. It reaches a maximum height of 1,800 m., but ordinarily does not exceed 1,000 m. Near the middle there are really two chains between which the Baudo flows. The western slope is very steep, the distance between the crest and the ocean being, in some places, only a few hundred feet. According to Karsten, the rocks of the coast Cordilleras bear fossil species of shells and corals that still live in the Pacific Ocean at the base of these moun-

³*Die Anden des westlichen Columbiens.* Petermanns Mittheil, 1893, p. 129.

tains. It would appear that the west Cordillera are late quaternary. There are no crystalline rocks.

The mountains of Darien have a different trend and form the present boundary between Panama and Colombia.

If Hettner is right about the age of the coast Cordilleras, then the streams flowing westward from the western Cordilleras, the present Calima, Cucurupi, Jujiado, Sipi, Tamana, Condoto, and upper San Juan, as well as the Raspadura, upper Atrato, Certegui, Yurri, and Sucio flowed into the Pacific at no very remote period. Along with the formation of the coastal Cordilleras there was formed the trough between them and the western Cordilleras indicated at present by the Gulf of Uraba on the north, and the Bay of Buenaventura on the south.

The rivers Atrato and San Juan must have been later developments, the Atrato gathering the waters of the Raspadura and the streams north of it flowing from the western Andes and emptying them into the Caribbean, the San Juan gathering the waters of the streams between the upper San Juan and the Rio Calima flowing from the western Cordilleras and emptying them into the Pacific.

It would seem then, that the oldest of the present rivers of western Colombia is the Cauca. The Magdalena, the largest river, developed with the formation of the newer Cordillera of Bogota. The youngest rivers are the San Juan and Atrato, described above. A lowering of Colombia north of Buenaventura, by as much as 200 feet, would convert the valleys of the San Juan and the Atrato into two long bays or a strait and cause the Magdalena, the Cauca, and the Cesar to empty independently into a great bay or lake extending from Santa Marta to a little way above El Banco.

Horizontal Distribution of the Fishes of Eastern Panama, Western Colombia, and the Pacific Slopes of Ecuador and Peru south to Pacasmayo. The following list gives the distribution of all of the fishes in the various rivers in the area outlined above. It answers the first of the problems in geographic distribution: What fishes are found in the area under consideration?

	Panama			Atlantic		Pacific slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuira basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Paita to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Paita, Chira, and Piura basins.
35. <i>Trachycorystes amblops</i> M and H...				—								
36. <i>Ageneiosus caucanus</i> St.....				—	—	—						
37. <i>Ageneiosus dentatus</i> K.....						—						
38. <i>Astroblepus homodon</i> (R.).....						—						
39. <i>Astroblepus guentheri</i> (B.).....						—						
40. <i>Astroblepus chapmani</i> (E.).....						—						
41. <i>Astroblepus retropinnis</i> (R.).....								—				
42. <i>Astroblepus trifasciatus</i> (E.).....								—				
43. <i>Astroblepus cyclops</i> (H.).....									—	—	—	
44. <i>Astroblepus unifasciatus</i> (E.).....						—		—				
45. <i>Astroblepus santanderensis</i> E.....						—		—				
46. <i>Astroblepus cirratus</i> (R.).....							—	—				
47. <i>Astroblepus frenatus</i> E.....						—		—				
48. <i>Astroblepus grixalvii</i> H.....						—			—	—	—	
49. <i>Astroblepus micrescens</i> E.....						—		—				
50. <i>Astroblepus fissidens</i> (R.).....										?	?	
51. <i>Astroblepus chotae</i> (R.).....						—			—	—	—	
52. <i>Astroblepus longifilis</i> (St.).....				—	?	—	?		—	?		
53. <i>Astroblepus heterodon</i> (R.).....								—				
54. <i>Astroblepus simonsi</i> (R.) ¹												
55. <i>Astroblepus roseui</i> E.....												—
56. <i>Paracetopsis occidentalis</i> (St.).....											—	
57. <i>Hemicetopsis othonops</i> E.....						—						
58. <i>Hemicetopsis amphioxus</i> E.....					—		—		—			
59. <i>Pygidium laticeps</i> (K.).....									—	—		
60. <i>Pygidium stellatum</i> E.....						—						
61. <i>Pygidium chapmani</i> E.....						—		—				
62. <i>Pygidium taenium</i> (K.).....									—	?		
63. <i>Pygidium caliense</i> E.....						—						
64. <i>Pygidium latidens</i> E.....							—					
65. <i>Pygidium stramineum</i> E.....						—						
66. <i>Pygidium unicolor</i> R.....							—					
67. <i>Pygidium bogotense</i> E.....						—						
68. <i>Pygidium nigromaculatum</i> (B.).....						—						

¹Rio Santa.

	Panama				Atlantic		Pacific slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Patia, Chira, and Pura basins.	Pacasmayo.
69. <i>Pygidium poeyanum</i> (C.) ²													
70. <i>Pygidium quechuorum</i> St. ²													
71. <i>Pygidium punctulatum</i> (C. and V.) ³													
71a. <i>Pygidium p. piurae</i> E.....												—	—
72. <i>Pygidium dispar</i> T.....													
73. <i>Pygidium banneaui</i> E.....						—							
74. <i>Pygidium spilosoma</i> R.....						—	—	—					
75. <i>Pygidium venulosum</i> St.....						—							
76. <i>Pygidium latistriatum</i> E.....						—							
77. <i>Pygidium striatum</i> M. and H.....				—		—		—					
78. <i>Pygidium regani</i> E.....						—	—						
79. <i>Pygidium retropinne</i> R.....						—							
80. <i>Eremophilus mutisii</i> H.....						—							
81. <i>Corydoras melanotaenia</i> R. ⁴						—							
82. <i>Hoplosternum magdalenae</i> E.....						—							
83. <i>Hoplosternum punctatum</i> M. and H....	—	—											
84. <i>Plecostomus spinosissimus</i> St.....											—		
85. <i>Plecostomus tenuicauda</i> St.....						—							
86. <i>P. plecostomus panamensis</i> E.....	—	—		—									
87. <i>Hemiancistrus landoni</i> E.....											—		
88. <i>Hemiancistrus annectens</i> R.....									—				
89. <i>Hemiancistrus holostictus</i> R.....							—						
90. <i>Hemiancistrus wilsoni</i> E.....					—								
91. <i>Hemiancistrus aspidolepis</i> (G.) ⁵													
92. <i>Pterygoplichthys undecimalis</i> St.....						—							
93. <i>Lasiancistrus caucanus</i> E.....						—							
94. <i>Lasiancistrus mayoloi</i> (E.).....							—						
95. <i>Lasiancistrus planiceps</i> (M. and H.)...				—									
96. <i>Pseudancistrus daguae</i> (E.).....								—					
97. <i>Pseudancistrus pediculatus</i> E.....							?						
98. <i>Pseudancistrus carnegiei</i> E.....						—							
99. <i>Pseudancistrus setosus</i> (B.).....						—	?						

²Arequipa.³Rio Rimac.⁴In Rio Meta.⁵Northeastern Panama.

	Panama	Atlantic	Pacific slope
	Chagres basin. Pacific slope of Canal zone.	Chepo basin. Tuira basin. Atrato basin. Magdalena basin.	San Juan basin. Dagua basin. Patia to Santiago. Esmeraldas to Portoviejo. Guayaquil basin. Patia, Chirra, and Piura basins. Pacasmayo.
134. <i>Curimatus troscheli</i> (G.).....	-	-	-
135. <i>Curimatus mivarti</i> St.....	-	-	-
136. <i>Parodon suborbitalis</i> C. and V.....	-	-	-
137. <i>Parodon caliensis</i> B.....	-	-	-
138. <i>Apareiodon ecuadoriensis</i> (E. and H.)....	-	-	-
139. <i>Apareiodon terminalis</i> (E. and H.)....	-	-	-
140. <i>Apareiodon dariensis</i> (M. and H.)....	-	-	-
141. <i>Saccodon wagneri</i> K. and S.....	-	-	-
142. <i>Saccodon cranioccephalum</i> Th.....	-	-	-
143. <i>Prochilodus longirestris</i> St.....	-	-	-
144. <i>Prochilodus humeralis</i> G.....	-	-	-
145. <i>Prochilodus magdalenae</i> St.....	-	-	-
146. <i>Prochilodus steindachneri</i> St.....	-	-	-
147. <i>Prochilodus stigmaturus</i> F.....	-	-	-
148. <i>Leporinodus sexdentatus</i> E.....	-	-	-
149. <i>Abramites eques</i> St.....	-	-	-
150. <i>Leporinus striatus</i> K.....	-	-	-
151. <i>Leporinus ecuadoriensis</i> E. and H.....	-	-	-
152. <i>Leporinus muyscorum</i> St.....	-	-	-
153. <i>Characidium fasciatum</i> R.....	-	-	-
154. <i>Characidium caucanum</i> E.....	-	-	-
155. <i>Characidium phoxocephalum</i> E.....	-	-	-
156. <i>Pyrrhulina semifasciata</i> R.....	-	-	-
157. <i>Lebiasina bimaculata</i> C. and V.....	-	-	-
158. <i>Lebiasina multimaculata</i> B.....	-	-	-
159. <i>Piabucina festae</i> B.....	-	-	-
160. <i>Piabucina panamensis</i> Gill.....	-	-	-
161. <i>Piabucina aureoguttatus</i> F.....	-	-	-
162. <i>Piabucina astrigata</i> R.....	-	-	-
163. <i>Grundulus bogotensis</i> H.....	-	-	-
164. <i>Phanagoniates macrolepis</i> (M. and H.)..	-	-	-
165. <i>Compsura gorgonae</i> (E. and G.).....	-	-	-
166. <i>Odontostilbe hastata</i> E.....	-	-	-
167. <i>Pseudochirodon affinis</i> (M. and H.)..	-	-	-

	Panama				Atlantic		Pacific slope						
	Cagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Patia, Chirra, and Piura basins.	Pacasmayo.
168. Cheiredon insignis St.					-	-							
169. Brycon alburnus (G.)											-		
170. Brycon atricaudatus (K.)									-	?	-	-	-
171. Brycon meeki E. and H.							-	-	-				
172. Brycon dentex G.										-	-		
173. Brycon rubricauda St.						-							
174. Brycon henni E.						-	-	-	-				
175. Brycon argenteus M. and H.		-	-	-									
176. Brycon oligolepis R.					-		-	-	-				
177. Brycon petrosus M. and H.	-												
178. Brycon moorei St.						-							
179. Brycon ecuadoriensis E. and H.											-		
180. Brycon striatulus (K.)		-	-	-									
181. Brycon chagrensis (K.)	-												
182. Othonophanes labiatus (St.)						-							
183. Pseudochalceus lineatus K.											-		
184. Hyphessobrycon inconstans (E. and O.)	-				-	-							
185. Hyphessobrycon poecilioides E.						-							
185. Hyphessobrycon ecuadoriensis E. and H.											-		
187. Hyphessobrycon panamensis Durbin.	-				-	-	-						
188. Hyphessobrycon p. daguae E.								-	-				
189. Astyanax festae (B.)									-	-			
190. Astyanax himaculatus borealis E.						-				-			
191. Astyanax orthodus E. and O.					-				-				
192. Astyanax stilbe (C.)					-								
193. Astyanax magdalenae E. and H.						-							
194. Astyanax atratoensis E.					-	-							
195. Astyanax caucanus (St.)						-							
196. Astyanax filiferus (E.)						-							
197. Astyanax microlepis E.						-							
198. Astyanax daguae								-					
199. Astyanax ruberrimus E.	-	-	-	-			-	-	-				
200. Astyanax fasciatus (C.)		-	-	-		-	-						
201. Astyanax heterurus E. and W.					-								

	Panama				Atlantic		Pacific slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuira basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Patia, Chira, and Pura basins.	Pacasmayo.
202. <i>Astyanax aurecaudatus</i> E.						—							
203. <i>Genycharax tarpon</i> E.						—							
204. <i>Creagrutus beni</i> E.						—							
205. <i>Creagrutus brevipinnis</i> E.						—							
206. <i>Creagrutus magdalenae</i> E.						—							
207. <i>Creagrutus affinis</i> St.				—	—	—	—						
208. <i>Creagrutus notrepidoides</i> M. and H.	—					—							
209. <i>Creagrutus caucanus</i> E.						—							
210. <i>Microgenys minutus</i> E.						—							
211. <i>Phenacobrycon henni</i> E.						—				—	—		
212. <i>Argopleura conventus</i> E.						—							
213. <i>Argopleura diguensis</i> E.						—							
214. <i>Argopleura checoensis</i> E.					—		—						
215. <i>Argopleura magdalenensis</i> E.						—							
216. <i>Bryconamericus simus</i> (B.)									—				
217. <i>Bryconamericus emperador</i> E.	—	—	—	—									
218. <i>Bryconamericus cascajalensis</i> M. and H.		—											
219. <i>Bryconamericus ortholepis</i> E.					—		—						
220. <i>Bryconamericus scopiferus</i> E.							—	—	—				
221. <i>Bryconamericus s. guzitaræ</i> E.									—	—			
222. <i>Bryconamericus caucanus</i> E.						—							
223. <i>Bryconamericus peruanus</i> (M. and T.)										—	—	—	—
224. <i>Bryconamericus brevirostris</i> (G.)											—	—	
225. <i>Bryconamericus scleroparius</i> R.							?			?			
226. <i>Landenia latidens</i> E. and H.											—	—	
227. <i>Hemibrycon tolimae</i> (E.)						—			—				
228. <i>Hemibrycon colombianus</i> E.						—							
229. <i>Hemibrycon bequillae</i> (E.)						—							
230. <i>Hemibrycon polyodon</i> (G.)											—		
231. <i>Hemibrycon dariensis</i> M. and H.				—									
232. <i>Hemibrycon dentatus</i> (E.)						—							
233. <i>Hemibrycon decurrens</i> (E.)						—							
234. <i>Nematobrycon palmeri</i> E.							—						
235. <i>Nematobrycon amphiloxy</i> E.					—		—						

	Panama				Atlantic		Pacific slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Patia, Chira, and Pura basins.	Pacasmayo.
236. <i>Parastremma sadina</i> E.....					-		-		-				
237. <i>Rhoadsia altipinna</i> F.....										-	-		
238. <i>Rhoadsia minor</i> E. and H.....									-				
239. <i>Pterobrycon landoni</i> E.....													
240. <i>Microbrycon minutus</i> E.....													
241. <i>Gephyrocharax</i> ⁶ <i>chocoensis</i> E.....							-						
242. <i>Gephyrocharax caucanus</i> E.....													
243. <i>Gephyrocharax melanocheir</i> E.....													
244. <i>Gephyrocharax atricaudata</i> M.....	-	-	-	-									
245. <i>Gephyrocharax intermedius</i> M. and H.....		-											
246. <i>Chalcinus magdalenae</i> St.....													
247. <i>Thoracocharax magdalenae</i> E.....													
248. <i>Thoracocharax maculatus</i> St.....		-	-	-	-		-						
249. <i>Salminus affinis</i> St.....													
250. <i>Charax atratoensis</i> E.....					-								
251. <i>Charax magdalenae</i> St.....													
252. <i>Roeboides magdalenae</i> E.....													
253. <i>Roeboides guatemalensis</i> G.....	-												
254. <i>Roeboides cauae</i> E.....													
255. <i>Roeboides occidentalis</i> M. and H.....	-	-	-	-									
256. <i>Roeboides hildebrandi</i> E.....							-		-				
257. <i>Roeboides meeki</i> E.....					-								
258. <i>Roeboides dayi</i> St.....													
259. <i>Gilbertolus alatus</i> (St.).....					-								
260. <i>Acestrocephalus anomalus</i> St.....													
261. <i>Ctenolucinus insculptus</i> St.....													
262. <i>Ctenolucinus beani</i> Fowler.....		-	-	-	-		-						
263. <i>Hoplias microlepis</i> (G.).....	-	-	-							-	-		
264. <i>Hoplias malabaricus</i> (B.).....				-	-	-	-		-				
265. <i>Gymnotus carapo</i> L.....					-	-	-						
266. <i>Sternopygus macrurus</i> (Bl. and Sch.)..					-	-	-	-	-	-	-		
267. <i>Sternopygus dariensis</i> M. and H.....				-									

⁶A species of this genus has recently been taken by Pearse in Lake Valencia, near Caracas, Indiana University Studies No. 44, 1920.

	Panama				Atlantic		Pacific Slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Paita, Chira, and Piura basins.	Pacasmayo.
268. <i>Eigenmannia virescens</i> (Val.).....			—	—	—	—							
269. <i>Hypopomus brevirostris</i> St.....	—		—	—	—	—							
270. <i>Hypopomus occidentalis</i> R.....							—						
271. <i>Sternarchus leptorhynchus</i> E.....							—	—					
272. <i>Sternarchus rostratus</i> M. and H.....				—	?	—							
273. <i>Sternarchus mariae</i> E. and F.....						—							
274. <i>Sternarchus spurrelli</i> R.....							—						
275. <i>Synbranchus marmoratus</i> Bl.....						—							
276. <i>Anguilla chrysypa</i> R.....						—							
277. <i>Sardinella stolidifera</i> J. and G.....							—	—			—		
278. <i>Stolephorus lucidus</i> J. and G.....								—	?	—	—?		
279. <i>Stolephorus branchiomas</i> E.....								—					
280. <i>Stolephorus pœyi</i> (K. and St.).....			—										
281. <i>Anchovia macrolepidota</i> (K. and St.)...			—										
282. <i>Tarpon atlanticus</i> (C. V.).....						—							
283. <i>Gambusia nicaraguensis</i> G.....	—	—											
284. <i>Gambusia episcopi</i> St.....	—	—	—										
285. <i>Gambusia cascajalensis</i> M. and H.....	—	—											
286. <i>Gambusia caliensis</i> E. and H.....						—							
287. <i>Priapichthys nigroventralis</i> E. and H...					—		—						
288. <i>Priapichthys tridentiger</i> (G.).....	—	—	—										
289. <i>Priapichthys t. cana</i> (M. and H.).....				—									
290. <i>Priapichthys dariensis</i> (M. and H.)....		—	—	—									
291. <i>Priapichthys panamensis</i> M. and H....	—												
292. <i>Poeciliopsis colombianus</i> (E. and H.)...								—					
293. <i>Poeciliopsis isthmensis</i> R.....	—												
294. <i>Mollienisia spheops</i> (C. and V.).....	—	—				—							
295. <i>Mollienisia caucana</i> (St.).....				—	?	—							
296. <i>Rivulus peruanus</i> R. ⁷													
297. <i>Rivulus brunneus</i> M. and H.....	—												
298. <i>Rivulus elegans</i> St.....	—				—	—	—						

⁷Perim, Peru.

	Panama				Atlantic		Pacific Slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Paita, Chira, and Pura basins.	Pacasmayo.
299. Rivulus magdalenae E. and H.....						-							
300. Rivulus brevis R. ⁸													
301. Pseudopoecilia festae (B.).....										-			
302. Pseudopoecilia fria (E. and H.).....											-		
303. Diphyacanthus chocoensis H.....							-						
304. Neoheterandria elegans H.....					-								
305. Orestias elegans G. ⁹													
306. Orestias sp. ¹⁰													
307. Tylosurus fluviatilis R.....					-		-		-	?	-		
308. Mugil curema C. and V.....										-	-		
309. Mugil cephalus L.....													-
310. Mugil incilis G.....	-					-							
311. Mugil liza C. and V.....						-							
312. Mugil charlottae St.....						-					-		
313. Mugil brasiliensis St.....						-							
314. Querimana harengus G.....												-	
315. Agonostomus monticola M. and H.....	-	-	-										
316. Agonostomus macracanthus R.....	-					-							
317. Agonostomus nasutus G.....					?		-						
318. Joturus daguae E.....								-					
319. Joturus pichardi Poey.....	-		-	-									
320. Thyrina colombiensis Hubbs.....							-	-	-				
321. Menidia chagresi M. and H.....	-												
322. Basilichthys semotilus (Cope) ¹¹													
323. Centropomus ¹² grandoculatus, J. and E.....								-					
324. Centropomus armatus Gill.....								-					
325. Centropomus unionensis (B.).....											-		
326. Centropomus undecimalis (Bl.).....	-				-	-					-		
327. Centropomus ensiferus Poey.....				-		-							
328. Centropomus pedimacula Poey.....						-							

⁸Colombia.⁹Headwaters of Rimac.¹⁰Crucero Alto, Southern Peru.¹¹From the Rio Rimac south, in Peru.¹²It is quite certain that the records for the species of Centropomus are very incomplete.

	Panama			Atlantic		Pacific Slope							
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Paita to Santiago	Esmeraldas to Portoviejo	Guayaquil basin.	Paita, Chira, and Piura basins.	Icaasmayo.
329. <i>Centropomus parallelus</i> Poey.....	—												
330. <i>Pomadasys bayanus</i> J. and E.....			—				—	—	?	?			
331. <i>Pomadasys macracanthus</i> (G.).....								—			—		
332. <i>Pomadasys branicki</i> St.....								—					—
333. <i>Pomadasys sinuosus</i> E.....									—				
334. <i>Pomadasys andrei</i> (S.).....											—		
335. <i>Pomadasys schyri</i> St.....											—		
336. <i>Plagioscion surinamensis</i> (Bl.) ¹³						—							
<i>Haemulon plumieri</i> Lacepede.....						—							
<i>Micropogon altipinnis</i> (G.).....											—		
<i>Bairdiella armata</i> Gill.....						—							
<i>Calamus brachypomus</i> (Lockington).....								—					
<i>Eucinostomus dowi</i> Gill.....											—		
<i>Gerres peruvianus</i> C. and V.....								—			—	—	
<i>Gerres lineatus</i> (H.).....								—					
<i>Gerres aureolus</i> J. and G.....								—	—				
<i>Gerres rhombeus</i> C. and V.....						—							
<i>Gerres plumieri</i> C. and V.....						—							
<i>Iridio bimaculata</i> Wilson.....								—					
<i>Trichiurus lepturus</i> L.....						—							
<i>Spheroides testudineus</i> (L.).....						—							
337. <i>Geophagus steindachneri</i> E. and H.....						—							
338. <i>Geophagus crassilabris</i> St. ¹⁴	—	—	—	—		—?							
339. <i>Geophagus pellegrini</i> R.....					—		—						
340. <i>Aequidens coeruleopunctatus</i> (K. and St.).....	—	—	—	—				—					
341. <i>Aequidens latifrons</i> (St.).....					—	—	—						
342. <i>Aequidens sapayensis</i> (R.).....								—					
343. <i>Aequidens biseriatus</i> (R.).....					—		—						
344. <i>Aequidens rivulatus</i> (G.).....									—	—	—	—	—
345. <i>Neotroplus panamensis</i> M. and H.....	—												

¹³The following marine species without numbers have been recorded from the mouths of the respective rivers.

¹⁴Farthest north for the genus.

¹⁵Farthest north for the genus. It is not found in the department of Chiriqui.

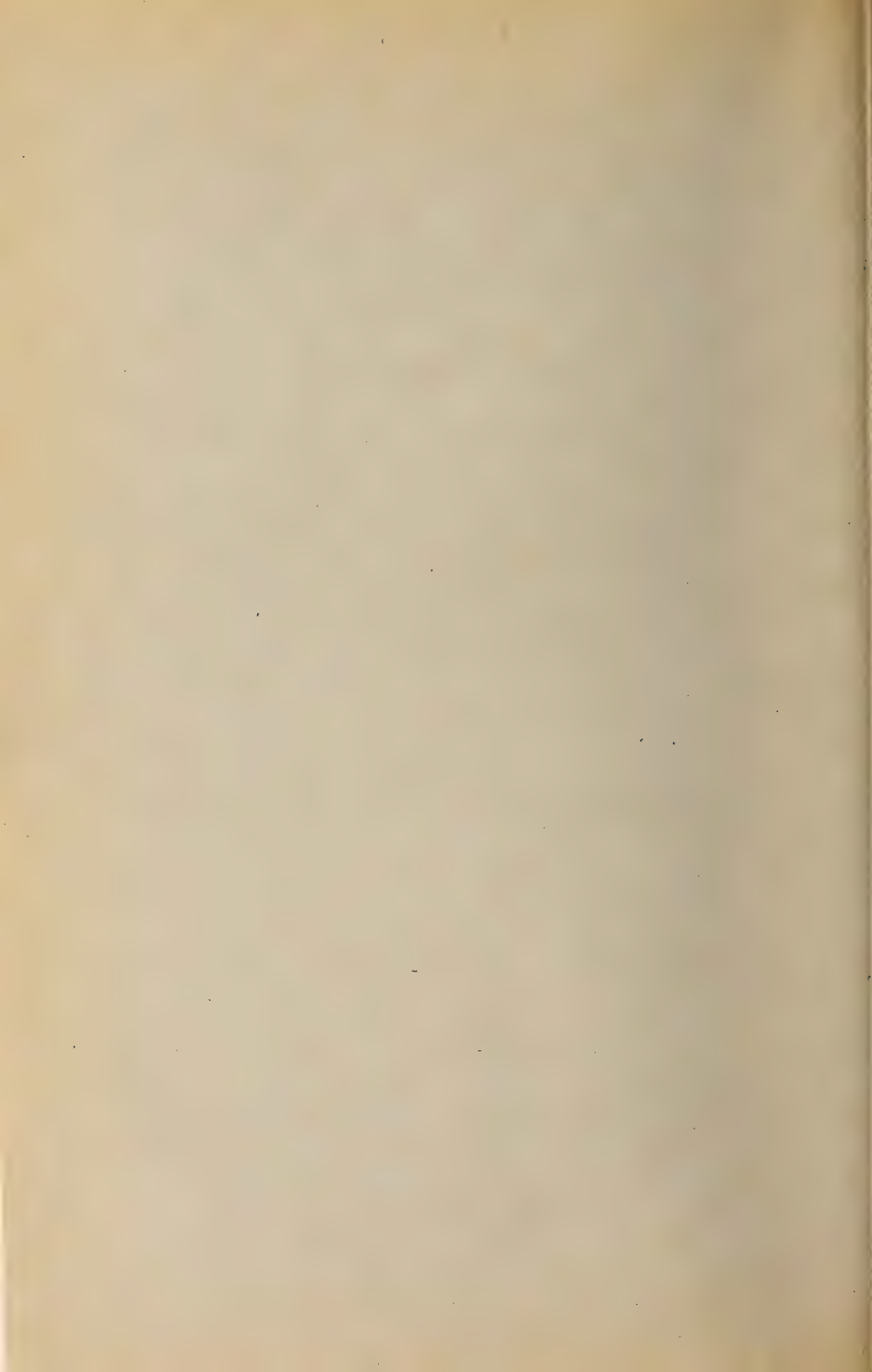
¹⁶Farthest south for the genus.

	Panama				Atlantic		Pacific Slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuira basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dagua basin.	Patio et Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Padra, Chira, and Pura basins.	Pacasmayo.
346. <i>Cichlasoma</i> (Theraps) <i>maculicauda</i> R.	—			17									
347. <i>Cichlasoma</i> (T) <i>tuyrense</i> M. and H.			—	—									
348. <i>Cichlasoma</i> (T) <i>sieboldii</i> K. and St. ¹⁵													
349. <i>Cichlasoma</i> (Astatheros) <i>atromaculatum</i> R.					—		—						
350. <i>Cichlasoma</i> (A) <i>ornatum</i> R.									—				
351. <i>Cichlasoma</i> (A) o. <i>gephyrum</i> E.							—	—					
352. <i>Cichlasoma</i> (A) <i>festae</i> B.											12		
353. <i>Cichlasoma</i> (A) <i>calobrense</i> M. and H.			—	—									
354. <i>Cichlasoma</i> (A) <i>altifrons</i> (K. and S.) ¹⁹													
355. <i>C. (Parapetenia) kraussii</i> St.					—	17							
356. <i>C. (P) umbriferum</i> M. and H.				—	—	17							
357. <i>Dormitator maculatus</i> Bloch.	—					—							
358. <i>Dormitator latifrons</i> (Richardson)		—	—	?			?	—	?	—	—		
359. <i>Eleotris picta</i> K. and St.		—	—	?			—	?	?	—	—		
360. <i>Eleotris pisonis</i> (Gmelin)	—					—							
361. <i>Eleotris isthmensis</i> H.	—												
362. <i>Philypnus dormitor</i> (Lacepede)	—												
363. <i>Philypnus maculatus</i> (G.)		—	—	—			—	—	—	?	—	—	—
364. <i>Hemieleotris latifasciatus</i> (M. and H.)		—	—					—					
365. <i>Hemieleotris levis</i> E.							—						
366. <i>Guavina guavina</i> (C. and V.)	—												
367. <i>Leptophilypnus fluviatilis</i> H.	—												
368. <i>Microeleotris panamensis</i> H.		—											
369. <i>Microeleotris mindii</i> H.	—												
370. <i>Sicydium salvini</i> Grant.	—	—				—			—				
371. <i>Sicydium hildebrandi</i> E.								—					
372. <i>Sicydium pittieri</i> R. ²⁰	—												
373. <i>Sicydium condotense</i> R.							—						
374. <i>Gobius daguae</i> E.								—					
375. <i>Gobionellus sagittula</i> (G.)								—					

¹⁷Farthest south for the subgenus.¹⁸Pacific streams of Northern Panama.¹⁹"Ausschliesslich" nur in den südlichen Flüssen des Department Chiriqui, (West Veragua).²⁰Costa Rica.

	Panama				Atlantic		Pacific Slope						
	Chagres basin.	Pacific slope of Canal Zone.	Chepo basin.	Tuyra basin.	Atrato basin.	Magdalena basin.	San Juan basin.	Dayua basin.	Patia to Santiago.	Esmeraldas to Portoviejo.	Guayaquil basin.	Patia, Chira, and Piura basins.	Pacasmayo.
376. <i>Awaous taiaica</i> (Lichtenstein).....	—												
377. <i>Awaous transandeanus</i> (G.).....		—	—	—			—	—	—	?	—		
378. <i>Awaous decemlineatus</i> E.....					—	—							
379. <i>Gobioides peruanus</i> (St.).....											—		
380. <i>Thalassophryne quadrizonatus</i> E.....					—								
381. <i>Batrachoides pacifici</i> G.....											—		
382. <i>Citharichthys gilberti</i> J. and E.....										—	—	—	
383. <i>Achirus klunzingeri</i> (St.).....										—	—		
384. <i>Achirus fischeri</i> (St.).....			—										
385. <i>Achirus panamensis</i> (St.).....						—							
Totals.....	51	38	43	52	72	162	71	46	49	22	64	10	11
Per cent of the total number (388) ²¹ of species, about.....	13	9.5	11	13.4	18	44	18	12	12.6	51	16	2.6	2.8

²¹From the above list two species recorded by Pellegrin from Santo Domingo de los Colorados in the Esmeraldas or Guayas basins have been omitted. They are *Gambusia pelegriani* E., *Ancistrus bufonius* C. and V. The total number for Esmeraldas to Portoviejo or for Guayaquil should be increased by two, depending on whether Santo Domingo de los Colorados lies in the one basin or the other. These two species with 71a brings the total number of species and varieties to 388.

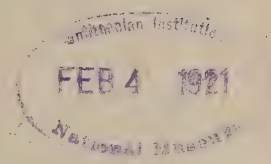




INDIANA UNIVERSITY STUDIES



Study No. 46



THE FISHES OF THE RIVERS DRAINING THE WEST-
ERN SLOPE OF THE CORDILLERA OCCIDENTAL OF
COLOMBIA, RIOS ATRATO, SAN JUAN, DAGUA,
AND PATIA. By CARL H. EIGENMANN, Dean of the
Graduate School, and Head of the Department of Zoölogy
in Indiana University.

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

Study No. 46

THE FISHES OF THE RIVERS DRAINING THE WESTERN
SLOPE OF THE CORDILLERA OCCIDENTAL OF CO-
LOMBIA, RIOS ATRATO, SAN JUAN, DAGUA, AND
PATIA. By CARL H. EIGENMANN, Dean of the Graduate
School, and Head of the Department of Zoölogy in Indiana
University.

FEB 4 1921

*The present study continues the discussion of the distribution of the
freshwater fishes of Colombia begun in Study No. 45.*

The Fishes of the Rivers Draining the Western Slope of the Cordillera Occidental of Colombia, Rios Atrato, San Juan, Dagua, and Patia

By CARL H. EIGENMANN

THE rivers mentioned in the title, and many others between them or tributary to them, with one exception, rise in the western Andes of Colombia and flow westward, for a space, at least. The Patia forms the exception. It has cut thru the western Cordillera, rising in and draining the inter-andean parks between Popayan and Tulcan. The Cordillera Occidental is the oldest of the Cordilleras and extends from near Cartagena, on the northern coast of Colombia, to Cape Horn. For the most part the western slope of this Cordillera within Colombia is extremely wet.

A. THE ATRATO AND SAN JUAN

The particular interest in this region centers in the Rios Atrato and San Juan. They flow between the Cordillera Occidental to the east of them, and the coastal Cordilleras to the west of them. They rise on the western slope of the western Cordilleras, flow westward for a space, and then the Atrato turns north, gathering many tributaries to flow into the Caribbean Sea. The San Juan turns south, also gathering many tributaries, and empties into the Pacific. The continental divide, separating their headwaters at Istmina, is little more than 300 feet above sea-level.

A general subsidence of but 300 feet would drown the Atrato valley, extending the Gulf of Uraba to Tambo, just north of Istmina, and would extend the Gulf of Buenaventura to above Istmina. The Atlantic and Pacific would be separated by a ridge less than 5 miles wide and less than 50 feet high. The tributaries of the Atrato and San Juan would be reduced to short mountain torrents.

In a general program for the investigation of the freshwater

fishes of South America¹ I pointed out the importance of western Colombia to the distribution of the fresh-water fishes. Concerning the Atrato-San Juan valleys I had previously said:² "This waterway is one of the strategic points in the geographical distribution of South American fishes and it is more than to be regretted that there is not a single record of a fresh-water fish from either of these rivers!"³

The Atrato river is better known than most of the rivers of South America. This is due to the fact that it was surveyed with the view of using it in part for an Atlantic and Pacific canal. Two elaborate accounts were published by the American government. The first is (Senate Ex. Doc. No. 9. Vol. 7, 2d session, 36th Congr., Reports of the Secretary of War, pp. 1-457, plates. Washington 1861), Lieutenant Michler's report of his survey for an interoceanic ship canal near the Isthmus of Darien. In 1874 appeared "Reports of Explorations and Surveys to ascertain the Practicability of a ship canal between the Atlantic and Pacific Oceans by the way of the Isthmus of Darien" by Thos. Oliver Selfridge (House Misc. 113, Washington, 1874).

Walter McFarland (Senate Ex. Doc. No. 46, Vol. 2, 2d session, 52 Congr., pp. 1-21, Washington, 1893), gives a short "Report upon an examination of the proposed routes for an interoceanic Canal between the Atlantic and Pacific oceans, known as the Nicaragua Route and the Darien or Atrato Route, made in March and April, 1874".⁴

Detailed maps were published in the first two of these volumes not only of the Atrato itself, from Quibdo to its mouth, but also of some of its western tributaries, the Truando and the Napipi.

The Atrato flows in a wide valley. It is navigable to good-sized steamers to Quibdo, which has an elevation of but 138 feet, and to good-sized canoes to Manigru. Between Manigru and Boca de Raspadura, the navigation even by canoes is more difficult and

¹The Fresh-Water Fishes of Patagonia and an Examination of the Archiplata-Archhelenis Theory. Reports of Princeton University Expedition to Patagonia, III, 1909, particularly pages 352-363 and 370-372.

²Science, N. S. XXII, pp. 18-20, July 7, 1905.

³Exclusive of the letter of Gill, quoted below.

⁴The daily press, during the controversy between England and the United States over Panama Canal tolls, raised the bugaboo that England would dig a canal of her own by way of the Atrato. But all talk of a canal from the Atlantic to the Pacific via the Atrato is buncombe. It would either be too long or require a tunnel. In either case there would not be enough water for the necessary locks. There is not the faintest danger that anyone will ever compete with the present Panama Canal by means of a canal via the Atrato.

only very small dugouts can make the whole distance to Tambo, near the divide. On the Pacific slope dugouts make the trip from Condoto and Istmina, without difficulty, to Puerto Negria. Small steamers ascend to Puerto Negria.

The coastal Cordilleras⁵ west of the Atrato and San Juan are said to be quarternary. If so, the valley of the Atrato-San Juan has but recently been open ocean. The height of land separating the Atrato and San Juan is said to have been pierced by a canal near Raspadura by the Bishop Raspadura. If so, nothing remains of it except possibly that *Astyanax fasciatus*, abundant on the Atlantic side, is sparingly found near the Pacific side of the reported location of the canal.

To what extent, if any, have the Atrato and San Juan been used as a highway for the intermigration of fresh-water fishes?

The Fishes of the Atrato. Lieutenant Schott, of the Michler expedition noted above, collected in the Rio Truando, a western tributary of the lower Atrato. The following letter of Gill refers to this collection.

The letter (*l.c.* pp. 257-259) gives a general report on all the fishes collected during Michler's expedition. A detailed list was never published. The fishes collected were evidently largely marine, probably from the Gulf of Uraba. The letter, omitting the parts pertaining to the strictly marine fishes, follows:

Smithsonian Institution,
Washington, D.C.,
January 14, 1861.

Dear Sir:

I have made a cursory examination of the collection, and I find that there are some interesting forms. Desirous of obliging you, I will furnish a list of the genera to which the species belong.

Of the Teleocephalous fishes, representatives of nineteen genera are present in the collection. They belong to the families enumerated below.

Of the family of Percoids there are three species, which belong to as many different genera and subfamilies.

There is one specimen of the genus *Centropomus* of Lacépède, a member of the subfamily of Percinae.

⁵The crest of these Cordilleras runs near the Pacific, being in some places only a few hundred feet from the ocean. The western side is very steep, the eastern slope is more gradual, and is separated from the Atrato by a wide lowland. There is a modification of this arrangement where the Rio Baudó flows between two ranges of the coast Cordilleras.

Of the genus *Epinephelus*, of Bloch, there is also a species; it represents the subfamily of Serraninae.

Both the above species are well known. The *Centropomus* is the true *Centropomus undecimalis* of Cuvier.

Of Lutjanus, the typical genus of a peculiar subfamily, Lutjaninae, there is also a species.

The family of Pristipomatoids and subfamily of Pristipomatinae is represented by a single species of the genus *Haemulon* of Cuvier.

The family of Chromoids or Ctenolabroids is represented by four species, which belong to the genera *Cichlasoma* of Swainson, *Geophagus* of Heckel, and *Heros* of Heckel. All of these belong to one family, for which the name of Chrominae is acceptable.

The suborder of Physostomi is represented by the families of Characinoidea and Erythrinoids. There are species of the following subfamilies and genera:

Of the family of Characinae;

Subfamily of Pacuinae;

Genus *Pacu*, of Spix;

Subfamily of Leporininae;

Genus *Leporinus*, of Spix;

Subfamily of Tetragonopterinae;

Genus *Astyanax*, of Baird and Girard, or *Poecilurichthys* of Gill.

Subfamily of Xiphostominae;

Genus *Ctenolucinus* of Gill;

Subfamily of Hydrocyoninae;

Genus *Cynopotamus* of Valenciennes.

Of the family of Erythrinoids there is one representative.

Subfamily Erythrininae;

Genus *Macrodon* of Müller and Troschel.

There is also a fine new species of the family of Gymnotoids.

Subfamily Carapinae;

Genus *Sternopygus* of Müller and Troschel.

Of the subclass of Elasmobranchii and order of Plagiostomes there is also a single species.

Family Trygonoidae;

Subfamily Trygoninae,

Genus *Trygon* of Adanson.

I have given no specific names to any of the above species, although several are new, as it is uncertain when I will be able to describe them, and it would also be injurious to the progress of science to add to the synonymy by the publication of names of species which may be, before they can be described under those names, made known under other names.

Very truly yours,

THEO. GILL.

ARTHUR SCHOTT, Esq.

A few more of the species collected by Schott were later described by Eigenmann and Ogle (Proc. U.S. Nat. Mus., XXXIII, 1907, pp. 1-36). They are *Prochilodus beani*=*magdalenae*, *Astyanax orthodus*; *A. atratoensis*; *Charax atratoensis*.

In 1913 I collected at Boca de Ráspadura near the divide between the Atrato and San Juan, at Manigru, Boca de Certegui, Quibdo, and Rio Sucio.

During the Landon-Fisher Expedition of Indiana University Mr. Charles Wilson collected along the same general route and in the Truando, a western tributary of the lower Atrato.

The species in the lowest course of the Atrato and its species of *Astroblepus* and *Pygidium* living in the highlands have not been collected. These will in part be identical with Magdalena species. In spite of the deficiencies, 45 per cent of the species of the Atrato are known to occur in the Magdalena. Eight more species (about 10 per cent) have parallels in the Magdalena. Ninety per cent of its genera are also found in the Magdalena. The affinity or origin of these 90 per cent is certainly Magdalenan.

Four more genera, *Bunocephalus*, *Hemiancistrus*, *Ancistrus*, and *Piabucina* are found east of the Cordillera of Bogota and will probably be found in the Magdalena.

The genera not represented in the Magdalena are:

1. *Pristis*, a marine genus.
2. *Lebiasina*, otherwise found only on the Pacific slope.
(Probably immigrants from the San Juan and the south.)
3. *Phanagoniates*, autochthonous or from the Tuyra.
4. *Nematobrycon*, confined to the Atrato and the San Juan.
5. *Parastremma*, Atrato, San Juan, and Patia.
6. *Pterobrycon*, autochthonous.
7. *Microbrycon*, probably the female of the preceding.
8. *Neoheterandria*, Atrato.
9. *Thalassophryne*, marine.

It appears that either the Atrato and Magdalena received the ancestors of their fishes from the same source or the one derived its fauna from the other.

The degree of affinity of the Atrato fauna to that of the Magdalena is about the same as that of the Paraguay to that of the Amazon. As far as known the per cent of Atrato species found in the Magdalena is really less, but the extreme lowland fauna and the extreme highland fauna of the Atrato will most probably bring the per cent of identical species into the neighborhood of 50, if not to a higher per cent.

The Fishes of the San Juan. The knowledge of the fauna of the San Juan is based on collections made by Spurrell and Carpenter, reported upon principally by Regan (Ann. and Mag. Nat. Hist. (8) XII, Nov., 1913, pp. 462-473 and XIV, July, 1914, pp. 31-33); on collections made by myself at Puerto Negria, a point half-way to Istmina, and at Istmina; by Wilson at Puerto Negria, Istmina, Condoto; and by Henn, between Puerto Negria and the mouth of the Calima, and in the Calima river to near Buenaventura. While the river has not been exhausted we know all of the main features of the fish fauna of this river.

A Comparison of the Fish Faunas of the Atrato and San Juan. In the Atrato and San Juan there are now known 112 species of fishes. Only 31 or about 28 per cent of these are common to the two rivers.⁶

In the Atrato alone 72 species have been observed, in the San Juan alone 71 species. The 31 species⁶ common to the Atrato and San Juan form about 44 per cent of the entire San Juan fauna. Of the fishes inhabiting the San Juan and other west coast streams 42 species have not been taken in the Atrato.

The species common to the Atrato and San Juan basin belong to one of four groups:

- A. Those common both north and south of the San Juan.
- B. Those common north of the Atrato, finding their furthest south in the San Juan.
- C. Those common south of the San Juan, finding their furthest north in the Atrato.
- D. Those confined to the two rivers.

A. To the first of these classes belong *Rhamdia wagneri*, *Chaetostomus fischeri*, *Sturisoma panamensis*, *Hyphessobrycon panamensis*, the latter represented by different varieties in the north and south, *Hoplias malabaricus*, *Sternopygus macrurus*. Of these only the first and last are found as far south as the Rio Guayas.

B. Those common north of the Atrato⁷ which find their furthest south in the San Juan, and which probably migrated south, are *Loricaria variegata*, *Piabucina panamensis*, *Astyanax fasciatus*, *Creagrutus affinis*, *Thoracocharax maculatus*, *Ctenolucinus beani*, *Rivulus elegans*, *Aequidens latifrons*, *Gymnotus carapo*.

⁶A number of species recorded from the San Juan and Magdalena but not hitherto taken in the Atrato might with reason be added to the 31, swelling the total to at least 36.

⁷As stated elsewhere, the territory in the Atrato basin which may be expected to harbor species of *Pygidium* and *Astroblepus* has not been examined.

C. Those finding their furthest north in the Atrato, some of which probably moved from the San Juan to the Atrato, are *Hemietopsis amphioxus*, *Loricaria jubata*, *Curimatus lineopunctatus*, *Brycon oligolepis*, *Bryconamericus ortholepis*, *Parastremma sadiana*, *Tylosurus fluviatilis*. Some of these may have originated in the Atrato and migrated southward.

D. Those confined to the two are *Ancistrus centrolepis*, *Lebiasina multimaculata*, *Argopleura chocoensis*, *Nematobrycon amphioxus*, *Gephyrocharax chocoensis*, *Priapichthys nigrocentralis*, *Geophagus pellegrini*, *Aequidens biseriatus*, *Cichlasoma atromaculatum*. The second of these probably migrated from the San Juan to the Atrato; most of the rest moved in the opposite direction.

Those which find their furthest north in the Atrato, or their furthest south in the San Juan, and which evidently moved north or south, by no means indicate the limit of the intermigration of species between the two river-basins. A glance at the list of species will show about six genera which are represented by distinct varieties or species in the two river basins and all of these migrated from the one to the other in more remote times, or what, in a measure, amounts to the same thing, they derived their now distinct varieties or species from a common center. Note particularly the genus *Nannorhamdia*, *Hemiancistrus*, *Roeboides*.

It is well to bear in mind that these lists are not exhaustive. Many more species will probably be found in one or the other or both of these basins. But while the details will have to be modified, the general conclusion that *the Atrato-San Juan valley has been used as a highway in fish dispersal* will not be shaken.⁸

Nevertheless, the relation of the San Juan fauna to that of the Atrato is less intimate than that of the Atrato to that of the Magdalena, or that of the Paraguay to that of the Amazon, more intimate than that of the Magdalena to the Orinoco fauna. The continental divide at Isthmina has been an effective barrier against the southward migration of a number of genera.

The genera *Plecostomus*, *Prochilodus*, and *Leporinus* swarm in the Magdalena and Atrato. They are also found in Guayas but *not* in the San Juan, Dagua, or anywhere between the Atrato and Guayas basins.

Those species or genera which find their furthest north in the

⁸Unless we should conclude that the present distribution dates back to the period before the Atrato-San Juan valleys, when the tributaries of the Atrato and San Juan emptied into the ocean.

San Juan, or their furthest south in the Atrato, very probably arose in the San Juan or south in the one case, or in the Atrato and north (which in this case includes the Magdalena), in the other.

Attention should be drawn to a few instances of especial interest.

Astyanax fasciatus is overabundant in the Atrato. A few specimens were taken in the San Juan basin near the Atrato basin, and it is quite possible that they have but very recently gone over to the San Juan. (See above, p. 4, lines 9 to 12.)

Of greatest interest is the distribution of *Hoplias malabaricus*, and incidentally, of *H. microlepis*. The former is universally distributed from the Atrato to Buenos Aires. It got from the Atrato into the Tuyra, and into the San Juan and even into the Patia. But both to the north of the Tuyra, in the Mamoni and Chagres, and to the south of the Patia it is replaced by *Hoplias microlepis*, a closely allied species. Has *H. microlepis* evolved independently in the Chagres and the Guayas or has it been crowded out between the two rivers by *H. malabaricus*?

Of the species found both east and west of the Andes of Bogota, only *Astyanax fasciatus*, *Gymnotus carapo*, *Sternopygus macrurus*, and *Hoplias malabaricus* are found in the San Juan.

**List of the Fishes in the Atrato and San Juan Rivers on Opposite
Sides of the Low Continental Divide**

	Atrato	San Juan
Pristidae		
<i>Pristis pectinatus</i>	—	—
<i>Pristis perrotteti</i>	—	—
Pomatomyridae		
<i>Potamotrygon magdalenae</i>	—	—
Bunocephalidae		
<i>Bunocephalus colombianus</i>	—	?
Siluridae		
<i>Pseudopimelodus zungaro</i>	—	—
<i>Pseudopimelodus transmontanus</i>	—	—
<i>Rhamdia wagneri</i>	—	—
<i>Nannorhamdia spurrelli</i>	—	—
<i>Nannorhamdia nemacheir</i>	—	—
<i>Pimelodella grisea</i>	—	—
<i>Pimelodella chagresi</i>	—	—
<i>Pimelodella eutania</i>	—	—
<i>Pimelodus elarias</i>	—	—
<i>Trachycorystes fisheri</i>	—	—
<i>Ageneiosus caucanus</i>	—	—
Cetopsidae		
<i>Hemiketopsis amphioxus</i>	—	—
Astroblepidae		
<i>Astroblepus eirratus</i>	—	—
<i>Astroblepus longifilis</i>	?	?
Pygidiidae		
<i>Pygidium</i> ¹⁰ <i>latidens</i>	—	—
<i>Pygidium unicolor</i>	—	—
<i>Pygidium spilosoma</i>	—	—
<i>Pygidium regani</i>	—	—
Loricariidae		
<i>Hemiancistrus holostictus</i>	—	—
<i>Hemiancistrus wilsoni</i>	—	—
<i>Lasiancistrus mayoloi</i>	—	—
<i>Pseudancistrus pediculatus</i>	—	—
<i>Pseudancistrus setosus</i>	—	?
<i>Cheiridodus honda</i> ¹¹	?	—
<i>Chaetostomus fischeeri</i>	—	—
<i>Chaetostomus marginatus</i>	—	—
<i>Chaetostomus lepturus</i>	—	—
<i>Ancistrus centrolepis</i>	—	—
<i>Loricaria latiura</i>	—	—
<i>Loricaria variegata</i>	—	—

⁹This species is found south of the San Juan and probably occurs in the San Juan altho it has not been found in it.

¹⁰The parts of the Atrato and Tuyra where the members of this genus abound have been but sparingly examined.

¹¹This species being found both in the Magdalena and San Juan probably occurs also in the Atrato between the two.

	Atrato	San Juan
<i>Loricaria fimbriata</i>	—	—
<i>Loricaria magdalenæ</i>	—	—
<i>Loricaria jubata</i>	—	—
<i>Sturisoma panamensis</i>	—	—
<i>Sturisoma tamanae</i>	—	—
<i>Sturisoma leightoni</i> ¹¹	?	—
Characidae		
<i>Curimatus lineopunctatus</i>	—	—
<i>Curimatus atratoensis</i>	—	—
<i>Curimatus magdalenæ</i>	—	—
<i>Parodon suborbitalis</i>	—	—
<i>Prochilodus magdalenæ</i>	—	—
<i>Leporinus striatus</i>	—	—
<i>Leporinus muyscorum</i>	—	—
<i>Characidium fasciatum</i>	—	—
<i>Lebiasina multimaculata</i>	—	—
<i>Piabucina panamensis</i>	—	—
<i>Phanagoniatus macrolepis</i>	—	—
<i>Odontostilbe hastatus</i>	—	—
<i>Cheirodon insignis</i>	—	—
<i>Brycon meeki</i>	—	—
<i>Brycon henni</i>	—	—
<i>Brycon oligolepis</i>	—	—
<i>Hyphessobrycon inconstans</i>	—	—
<i>Hyphessobrycon panamensis</i>	—	—
<i>Astyanax orthodus</i>	—	—
<i>Astyanax stilbe</i>	—	—
<i>Astyanax atratoensis</i>	—	—
<i>Astyanax ruberrimus</i>	—	—
<i>Astyanax fasciatus</i>	—	—
<i>Astyanax heterurus</i>	—	—
<i>Creagrutus affinis</i>	—	—
<i>Argopleura chocoensis</i>	—	—
<i>Bryconamericus ortholepis</i>	—	—
<i>Bryconamericus scopiferus</i>	—	—
<i>Nematobrycon palmeri</i>	—	—
<i>Nematobrycon amphioxus</i>	—	—
<i>Parastremma sadina</i>	—	—
<i>Pterobrycon landoni</i>	—	—
<i>Microbrycon minutus</i>	—	—
<i>Gephyrocharax chocoensis</i>	—	—
<i>Thoracocharax maculatus</i>	—	—
<i>Charax atratoensis</i>	—	—
<i>Rœboides hildebrandi</i>	—	—
<i>Rœboides meeki</i>	—	—
<i>Gilbertolus alatus</i>	—	—
* <i>Ctenolucinus beani</i>	—	—
<i>Hoplias malabaricus</i>	—	—

	Atrato	San Juan
Gymnotidæ		
Gymnotus carapo.....	—	—
Sternopygus macrurus.....	—	—
Hypopomus brevirostris.....	—	—
Hypopomus occidentalis.....	—	—
Eigenmannia virescens.....	—	—
Sternarchus rostratus ¹²	?	—
Sternarchus leptorhynchus.....	—	—
Sternarchus spurrelli.....	—	—
Stolephoridæ		
Sardinella stolifera.....	—	—
Symbranchidæ		
Symbranchus marmoratus ¹³	?	—
Pœciliidæ		
Priapichthys nigroventralis.....	—	—
Rivulus elegans.....	—	—
Mollienesia caucana ¹⁴	?	—
Diphyacanthus chocoensis.....	—	—
Neoheterandria elegans.....	—	—
Atherinidæ		
Thyrina colombiensis.....	—	—
Mugilidæ		
Agonostomus nasutus.....	?	—
Esocidæ		
Tylosurus fluviatilis.....	—	—
Haemulidæ		
Pomadasys bayanus.....	—	—
Centropomidæ		
Centropomus undecimalis.....	—	—
Cichlidæ		
Geophagus pellegrini.....	—	—
Aequidens latifrons.....	—	—
Aequidens biseriatus.....	—	—
Cichlasoma atromaculatum.....	—	—
Cichlasoma ornatum gephyrum.....	—	—
Cichlasoma kraussii.....	—	—
Cichlasoma umbriferum.....	—	—
Gobiidæ		
Eleotris picta.....	—	—
Hemieleotris latifasciatus.....	—	—
Philypnus maculatus.....	—	—
Hemieleotris levis.....	—	—
Sicydium condotense.....	—	—
Awaous transandeanus.....	—	—
Awaous decemlineatus.....	—	—
Batrachoididæ		
Thalassophryne quadrizonatus.....	—	—

¹²Found in the Tuyra west and the Magdalena east of the Atrato.¹³Found west, east, and south of the Atrato.¹⁴Found in Central America to the north of the Atrato.

B. THE ORIGIN OF THE FISH FAUNA OF THE DAGUA AND THE PATIA

The Rio Dagua empties into the Pacific immediately south of the mouth of the San Juan, at Buenaventura. The Dagua rises near Cali, on the Pacific slope of the western Cordilleras, flows northward between two chains of the western Cordilleras to Caldas. North of Caldas it passes thru a desert rain shadow cast by a western chain of the western Cordilleras, then breaks thru the western chain in a narrow gorge flowing westward in its lower course to the Pacific. The height of land between its upper reaches and the Cauca basin is little over 6,000 feet at its lowest place. Collections were made at Caldas, 3,722 feet, Cisneros at the western end of the gorge, 1,046 feet, Cordova, 120 feet, and at Buenaventura (sea-level). The distance between Caldas and Buenaventura is 49 miles; Cisneros and Buenaventura, 33 miles; Cordova and Buenaventura, 12 miles. Emptying so near the mouth of the San Juan, it may be fair to assume that all species common to the San Juan and the Patia occur also in the Dagua. A number of rivers between the Dagua and the Patia rise on the slopes of the western Cordilleras and flow into the Pacific.

The Patia is distinguished by rising with the Cauca in the elevated plain of Popayan, between the eastern and western Andes. The divide that separates the Cauca flowing north and the Patia flowing south is imperceptible. The Patia has cut a deep gorge in the western Cordilleras. Its lower, western course flows in the wet territory. It seems quite probable that the Patia cutting back from the coast has tapped upper tributaries of the Cauca. If so, it happened late in the life of the stream, for, aside from high mountain species, it captured no fishes from the fauna of the Cauca. The highest mountain species in the Cauca and the Patia lend color to the interchange of fishes between these rivers.

Collections were made by Mr. Arthur Henn in the Patia basin in the highland near Tuquerres and Sandona, at the mouth of the Guaitara at about 1,500 feet, between the mouths of the Telembi and the Magui, and by Messrs. Henn and Charles Wilson in the Telembi, a large southern tributary of the Patia.

The fishes of the Patia and the Dagua may have been derived from the San Juan on the north, the Guayas basin on the south, or from the Cauca, east of the western Cordilleras.

A comparison of the faunas of the Upper Cauca, the Dagua, and the Patia rivers, to determine to what extent the Cauca contributed to the Pacific slope Dagua and Patia and these to each other, shows that the Cauca's contribution over the Cordillera Occidental is all but nil.

There is but one species common to the three rivers, *Brycon henni*, which is not also found in the Atrato.

One mountain form, *Pygidium chapmani*, is common to the Upper Cauca and the upper course of the Dagua. Four high mountain species, *Astroblepus grivalvii*, *A. chotae*, *Bryconamericus caucanus*, and *Hemibrycon tolimae*, are common to the Cauca and the Patia. (See p. 13, lines 27 to 31.)

The fauna of the Patia consists of several Ecological groups.

I. High Andean forms: *Pygidium taenium*, *Astroblepus grivalvii* and *chotae*, *Bryconamericus caucanus*, *Hemibrycon tolimae*. All but the first of these are also found in the Cauca, and all but the last two are also found south of the Upper Patia.

II. Lowland species of remote marine origin: *Tylosurus fluviatilis*, *Thyrina colombiensis*, *Pomadasys* and the members of the Gobiidae. All of these, except possibly *Thyrina colombiensis*, are found both north and south of the Patia.

III. Twenty-five strictly fresh-water fishes living somewhere between brackish water and 3,000 feet. Of these:

a. One has a wide distribution both north and south of the Patia: *Sternopygus macrurus*. It may have come from the south or the north.

b. Other species and varieties: *Bryconamericus guaitarae*, *Curimatus lineopunctatus patiae*, and *Chaetostomus leucomelas* are peculiar to the Patia. They are modifications of San Juan-Atrato species.

c. *Hemiancistrus annectens* and *Cichlasoma ornatum* are all but confined to the Patia, being found elsewhere only in northwestern Ecuador.

d. The remaining species, 68 per cent of the 25 strictly fresh-water species, are found in one or all of the rivers Dagua, San Juan, Atrato to the north. A few of them, *Pseudopimelodus transmontanus*, *Pimelodella grisea*, *Loricaria jubata*, and *Brycon oligolepis*, found in the north extend a few miles south of the Patia into northwestern Ecuador.

Twenty-two species, 62 per cent of the entire Patia fish fauna, are known to occur in the Atrato, the San Juan, or the Dagua.

A certain per cent of the fauna of any river will be found in the rivers to either side of it. The very large per cent of the Patia fishes also found in the Atrato-San Juan, compared with a much smaller per cent found in the nearer Guayas, indicates beyond any peradventure that faunally the Patia belongs to the group of rivers to the north of it.

Leaving out of consideration the high mountain forms, the only species that indicates interchange between the Upper Cauca on the one hand and the Dagua or Patia on the other, is *Brycon henni*, a species not found in the Atrato. It is known to reach an elevation of at least 3,700 feet.

The Patia does not contain "boca chicas" (=Prochilodus), "dentones" (=Leporinus) or Plecostomas, all of which are found in the Guayas to the south and in the Atrato to the north.

The fact that the Upper Cauca has contributed so very little to the Dagua, or the latter so little to the Cauca, when the passes to cross have an elevation of but 6,000 feet, does away with the probability that any of the Magdalena fishes have come across the present high Cordilleras separating the Magdalena basin from the Orinoco.

Comparative List of the Fishes in the Rios Dagua, Patia, and the Upper Cauca. The lists are complete for the Rios Dagua, Upper Cauca, and Patia. Only those species of the Atrato, San Juan, and northern Ecuador are given that are also found in one of the rivers first mentioned.

	Rio Atrato	Rio San Juan	Rio Dagua	Rio Patia	Northern Ecuador	Upper Cauca
<i>Bunocephalus colombianus</i>	—	?	?	—	—	—
<i>Hemicetopsis amphioxus</i>	—	—	?	—	—	—
<i>Pseudopimelodus transmontanus</i>	—	—	?	—	—	—
<i>Cetopsorhamdia boquillæ</i>	—	—	—	—	—	—
<i>Rhamdia wagneri</i>	—	—	—	—	—	—
<i>Nannorhamdia nemacheir</i>	—	—	?	—	—	—
<i>Pimelodella grisea</i>	—	—	—	?	—	—
<i>Pimelodella modesta</i>	—	—	—	—	—	—
<i>Pimelodella eutænia</i>	—	—	—	—	—	—
<i>Pygigium chapmani</i>	—	—	—	—	—	—
<i>Pygidium taniun</i>	—	—	—	—	—	—
<i>Pygidium caliense</i>	—	—	—	—	—	—
<i>Pygidium spilosoma</i>	—	—	—	—	—	—
<i>Pygidium striatum</i>	—	—	—	—	—	?
<i>Hemiancistrus annectens</i>	—	—	—	—	—	—
<i>Lasiancistrus caucanus</i>	—	—	—	—	—	—
<i>Pseudancistrus daguæ</i>	—	—	—	—	—	—
<i>Chaetostomus fischeri</i>	—	—	?	?	—	—
<i>Chaetostomus leucomelas</i>	—	—	—	—	—	—
<i>Loricaria jubatæ</i>	—	—	?	—	—	—
<i>Sturisoma panamensis</i>	—	—	—	—	—	—
<i>Sturisoma leightoni</i>	—	—	—	—	—	—
<i>Farlowella gracilis</i>	—	—	—	—	—	—
<i>Astroblepus chapmani</i>	—	—	—	—	—	—
<i>Astroblepus retropinnis</i>	—	—	—	—	—	—
<i>Astroblepus trifasciatus</i>	—	—	—	—	—	—
<i>Astroblepus unifasciatus</i>	—	—	—	—	—	—
<i>Astroblepus cirratus</i>	—	—	—	—	—	—
<i>Astroblepus grixalvii</i>	—	—	—	—	—	—
<i>Astroblepus chotæ</i>	—	—	—	—	—	—
<i>Astroblepus heterodon</i>	—	—	—	—	—	—
<i>Astroblepus longifilis</i>	?	?	?	?	—	—
<i>Curimatus lineopunctatus</i>	—	—	—	—	—	—
<i>Curimatus patia</i>	—	—	—	—	—	—
<i>Parodon caliensis</i>	—	—	—	—	—	—
<i>Prochilodus magdalenæ</i>	—	—	—	—	—	—
<i>Characidium fasciatum</i>	—	—	—	—	—	—
<i>Characidium caucanum</i>	—	—	—	—	—	—
<i>Characidium phoxocephalum</i>	—	—	—	—	—	—
<i>Hyphessobrycon pœcilioides</i>	—	—	—	—	—	—
<i>Hyphessobrycon daguæ</i>	—	—	—	—	—	—

	Rio Atrato	Rio San Juan	Rio Dagua	Rio Patia	Northern Ecuador	Upper Cauca
<i>Astyanax orthodus</i>	—	?	?	—		—
<i>Astyanax microlepis</i>		—	—			—
<i>Astyanax daguæ</i>		—	—			—
<i>Astyanax ruberrimus</i>		—	—	—		—
<i>Astyanax fasciatus</i>	—	—				—
<i>Astyanax aurocaudatus</i>						—
<i>Creagrutus brevipinnis</i>						—
<i>Creagrutus caucanus</i>						—
<i>Microgenys minutus</i>						—
<i>Argopleura magdalenensis</i>						—
<i>Bryconamericus scopiferus</i>		—	—	—		—
<i>Bryconamericus guaitaræ</i>				—		—
<i>Bryconamericus caucanus</i>				—		—
<i>Brycon meeki</i>		—	—	—		—
<i>Brycon henni</i>		—	—	—		—
<i>Brycon oligolepis</i>		—	—	—		—
<i>Hemibrycon tolimæ</i>	—		—	—	—	—
<i>Hemibrycon boquillæ</i>				—		—
<i>Hemibrycon dentatus</i>				—		—
<i>Gephyrocharax caucanus</i>				—		—
<i>Parastremma sadina</i>	—	—	?	—		—
<i>Genycharax tarpon</i>						—
<i>Roeboides caucæ</i>						—
<i>Roeboides hildebrandi</i>		—	?	—		—
<i>Hoplias malabaricus</i>	—	—	?	—		—
<i>Sternarchus leptorhynchus</i>		—	—	—		—
<i>Sternopygus macrurus</i>	—	—	—	—	—	—
<i>Gambusia caliensis</i>						—
<i>Poeciliopsis colombianus</i>			—			—
<i>Joturus daguæ</i>			—			—
<i>Thyrina colombiensis</i>		—	—	—		—
<i>Tylosurus fluviatilis</i>	—		?	—	—	—
<i>Pomadasis</i> several species.....		—	—	—	—	—
<i>Aequidens sapayensis</i>			—	—	—	—
<i>Cichlasoma ornatum</i>			—	—	—	—
<i>Cichlasoma ornatum</i> <i>gephyrum</i>		—	—	—	—	—
<i>Dormitator latifrons</i>		?	—	?	—	—
<i>Philypnus maculatus</i>		—	—	—	—	—
<i>Sicydium hildebrandi</i>			—	—	—	—
<i>Awaous transandeanus</i>		—	—	—	—	—
Totals.....			32	34		34

C. ON VERTICAL DISTRIBUTION, PARTICULARLY IN THE PATIA RIVER

No very precise limits can be set for the vertical distribution of any of the fishes. Within limits otherwise suitable environment seems to affect distribution as much as altitude. *Pygidium* belongs to the heights but may descend to the sea; *Astroblepus* belongs to the heights but may also descend to near the sea.

In the south, *Orestias* and *Pygidium* reign on the greatest heights, both are found in Lake Titicaca (12,000), and in Lake Langilaio (about 14,000 feet). Lower down in the Urubamba river, into which Langilaio drains, come *Ancistrus* and a genus allied to *Bryconamericus*. Elsewhere in Peru, *Orestias* attains over 15,000 feet. In Ecuador, *Astroblepus* attains the greatest height, 13,400 feet. *Bryconamericus* and *Pygidium* come next. *Astroblepus* and *Pygidium* attain their maximum size in the mountains of central and southern Peru.

On the plains of Bogota, at about 9,000 feet, *Grundulus*, *Pygidium*, and *Eremophilus* are found. *Pygidium* also occurs above Bogota. At Ibagu  (4,250 feet) I secured a *Rivulus*, a *Bryconamericus*, and saw a *Geophagus*; an *Astroblepus* was reported. At Boquilla, 5,700 feet, *Astroblepus*, *Pygidium*, *Bryconamericus*, *Hemibrycon*, and *Astyanax* were found.

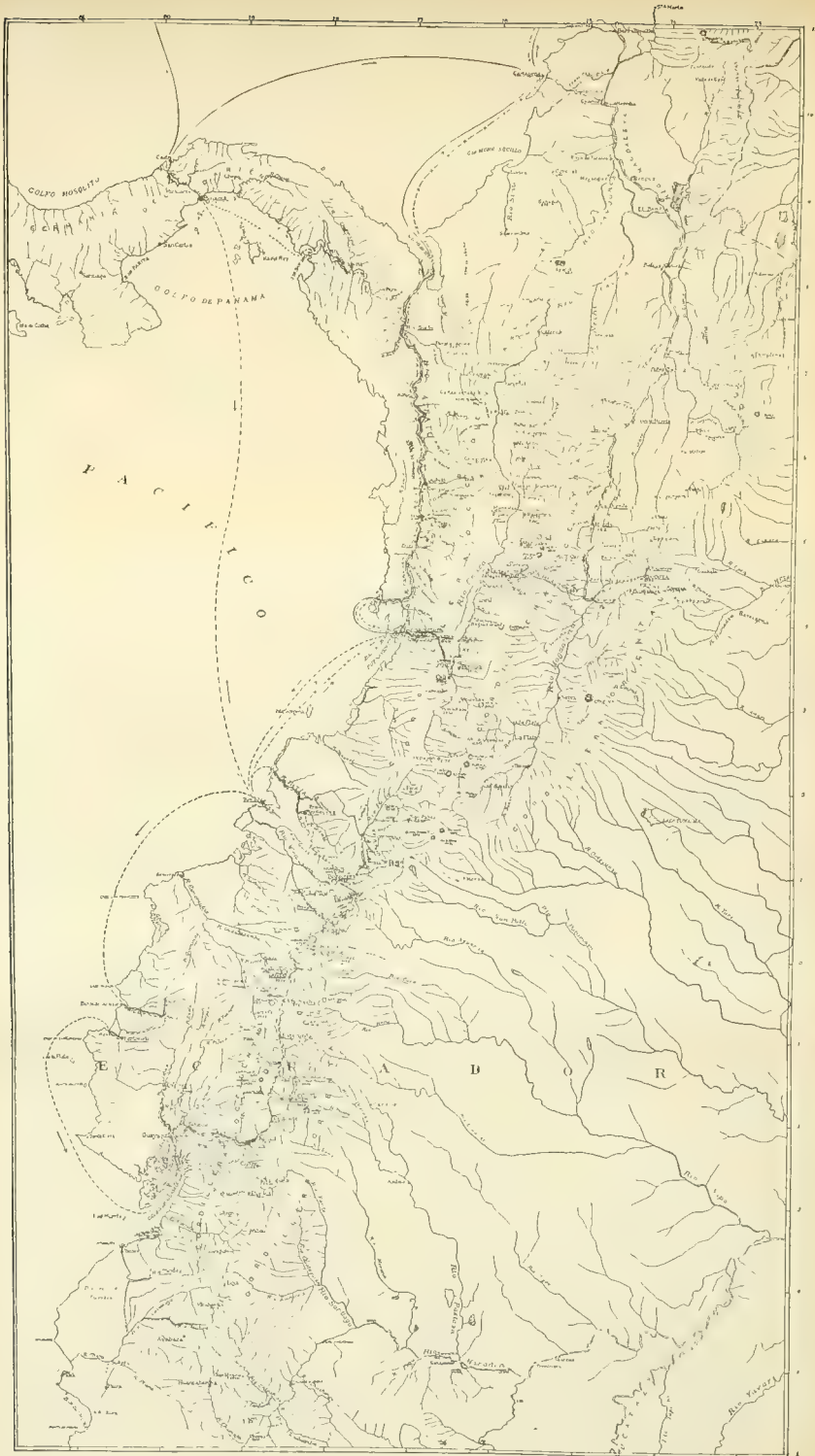
The following table illustrates the vertical distribution in the Patia basin. At 5,000 feet and upwards only *Astroblepus*, *Pygidium*, and *Bryconamericus* occur. At 1,500 feet two out of seven species are peculiar modifications of lowland forms. The rest are lowland species. The fishes at this altitude are largely fishes abundant in the lowlands, but not nearly all the lowland fishes attain this height. While there are species which are predominantly highland forms these may, in favorable places, descend to near the sea. The reverse is also true tho perhaps not to the same extent.

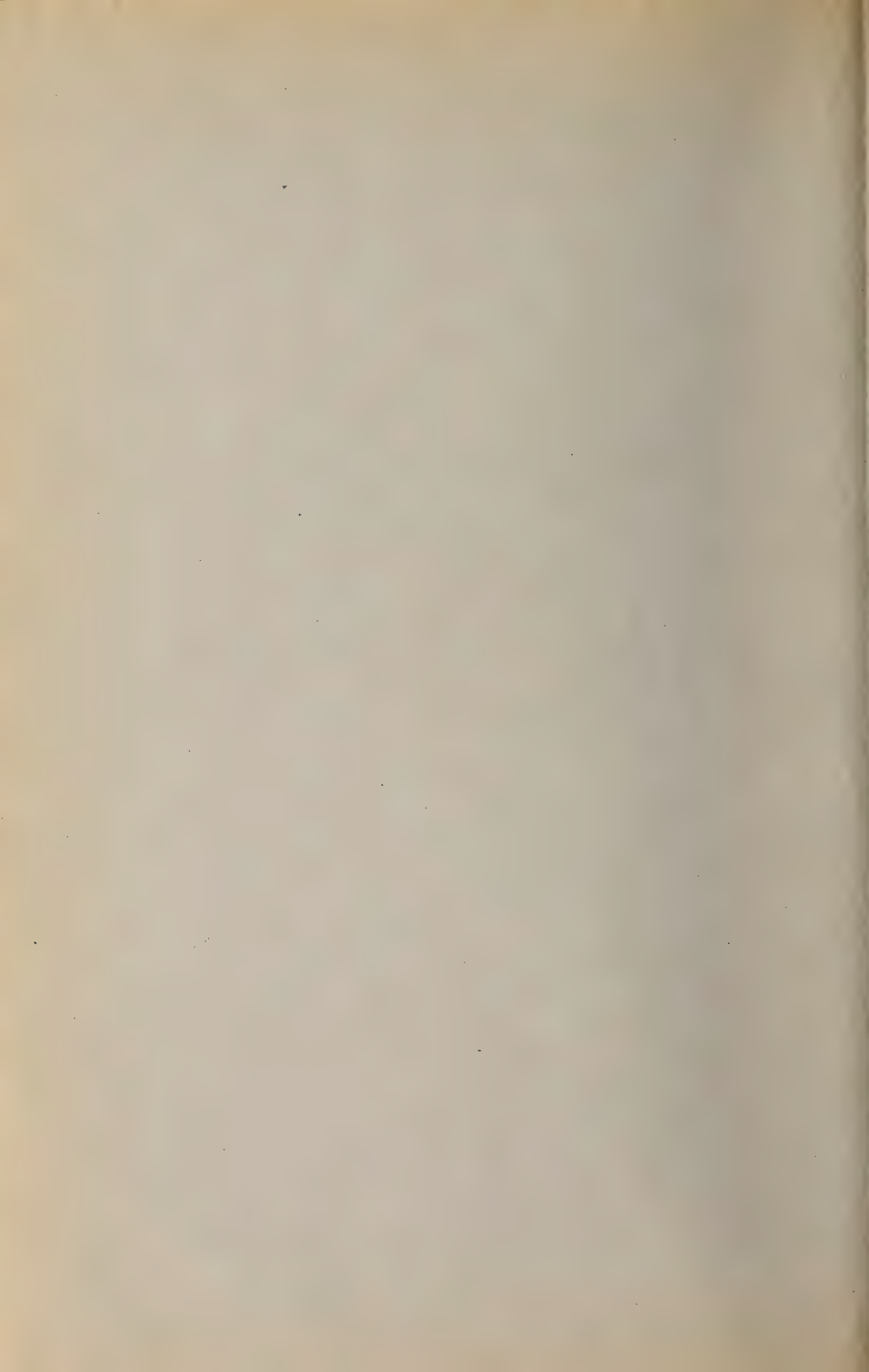
Table of the Vertical Distribution of the Fishes in the Patia Basin

	Telembi below 500	Lower Patia below 500	Guaitara 1,500	Sandona 5,000	Tuquerres 10,000
1. <i>Bunocephalus colombianus</i>	—				
2. <i>Hemicetopsis amphioxus</i>	—				
3. <i>Pseudopimelodus transmontanus</i>	—				
4. <i>Rhamdia wagneri</i>	—				
5. <i>Nannorhamdia nemacheir</i>	—				
6. <i>Pimelodella modesta</i>	—	—	—		
7. <i>Pimelodella eutania</i>	—				
8. <i>Pygidium tænium</i>	—			—	
9. <i>Hemiancistrus annectens</i>	—	—			
10. <i>Chætostomus leucomelas</i>	—	—			
11. <i>Loricaria jubata</i>	—	—			
12. <i>Sturisoma panamense</i>	—	—			
13. <i>Astroblepus grixalvii</i>	—				—
14. <i>Astroblepus chotæ</i>	—			—	
15. <i>Curimatus patiae</i>	—				
16. <i>Hyphessobrycon daguae</i>	—	—			
17. <i>Astyanax orthodus</i>	—				
18. <i>Astyanax ruberrimus</i>	—	—	—		
19. <i>Bryconamericus scopiferus</i>	—	—			
20. <i>Bryconamericus guaitarae</i>	—		—		
21. <i>Bryconamericus caucanus</i>	—		—		
22. <i>Brycon meeki</i>	—	—			
23. <i>Brycon henni</i>	—	—	—		
24. <i>Brycon oligolepis</i>	—	—	—		
25. <i>Hemibrycon tolimæ</i>	—			—	
26. <i>Parastremma sadina</i>	—				
27. <i>Rœboides hildebrandi</i>	—	—	—		
28. <i>Hoplias malabaricus</i>	—	—			
29. <i>Sternopygus macrurus</i>	—	—			
30. <i>Thyrina colombiensis</i>	—	—			
31. <i>Pomadasis sinuosus</i>	—	—			
32. <i>Aequidens sapayensis</i>	—	—			
33. <i>Cichlasoma ornatum</i>	—	—			
34. <i>Philypnus maculatus</i>	—	—			
35. <i>Awaous transandeanus</i>	—	—			
Totals	24	17	7	3	1

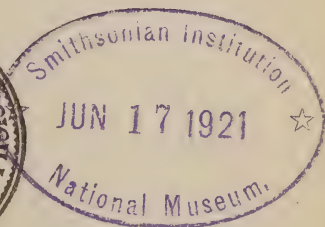
The large per cent of the total fauna in the Telembi, as compared with the much smaller per cent in the lower Patia, is probably altogether due to the much more thoro exploration of the Telembi.







INDIANA UNIVERSITY STUDIES



Study No. 47

- A. THE FRESH-WATER FISHES OF PANAMA EAST OF LONGITUDE 80° W.
- B. THE MAGDALENA BASIN AND THE HORIZONTAL AND VERTICAL DISTRIBUTION OF ITS FISHES.

By CARL H. EIGENMANN

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.



Study No. 47

- A. THE FRESH-WATER FISHES OF PANAMA EAST OF
LONGITUDE 80° W.
- B. THE MAGDALENA BASIN AND THE HORIZONTAL
AND VERTICAL DISTRIBUTION OF ITS FISHES.

By CARL H. EIGENMANN

The present study continues the discussion of the distribution of the fresh-water fishes of western South America begun in *Study No. 45* and continued in *Study No. 46*. Other articles on the same subject are: "The Fish Fauna of the Cordillera of Bogota" (*Journal Washington Academy of Sciences* X, pp. 460-468, October 4, 1920); "The Origin and Distribution of the Genera of the Fishes of South America west of the Maracaibo, Orinoco, Amazon, and Titicaca Basins". *Proc. Am. Philos. Soc.*, LX, 1921).

The detailed account of the specimens of this region, fully illustrated, forming *Contribution from the Zoölogical Laboratory of Indiana University No. 172*, is in the hands of the Carnegie Museum of Pittsburgh which has contracted to publish it.

The Fresh-Water Fishes of Panama¹ East of Longitude 80° W.

By CARL H. EIGENMANN

THE eightieth meridian passes thru the mouth of the Chagres river. East of it lie the entire eastern and southern Panama with the Chagres basin and Panama Canal, the Chepo basin, and the Tuyra basin. The Chagres is the only large river flowing toward the Atlantic; between the Chagres and Colombia the streams flowing toward the Atlantic are small. Nothing is known of the fish contents of those east of the Rio Cascajal at Porto Bello. In the region of the Chagres the continental divide is close to the Pacific ocean. Between the Chagres and Colombia the continental divide lies within a few miles of the Atlantic. The rivers coming from the mountains flowing nearly direct to the sea are short and very probably turbulent.

On the Pacific side there are numerous rivers longer than those on the Caribbean side, and inasmuch as there is considerable tide on the Pacific side, several of the rivers are navigable, the Tuyra being navigable half-way across the continent.¹ The rivers which have been examined for fishes are: first, the smaller rivers near the canal, the Chame, the Chorrera, the Grande, and the Juan Diaz; second, the Bayano or Chepo emptying about 25 miles east of Panama City; and third, the Tuyra emptying about 80 miles southeast of Panama City. Of these the Tuyra is by far the largest, draining with its tributaries a territory 120 miles north and south. Its basin lies just north of the Darien mountains, south of which the continental divide is again switched to near the Pacific ocean.

The natural interest in the faunas on the two sides of the Isthmus of Panama was greatly magnified when the Panama Canal was projected.

¹Miscellaneous information on Panama was published by the War Department in *Notes on Panama*, by Captain N. C. Hale, Washington, D.C., 1903. The *Report of the Isthmian Canal Commission* 1899-1901, Washington, 1904, contains excellent maps of the entire region.

The fresh-water fishes on the two slopes of the present state of Panama were incidentally considered in various articles, or books dealing largely with other things. Those published before 1864-66 were reviewed in detail in Günther's volume, "An Account of the Fishes of the States of Central America, Based on Collections made by Captain J. M. Dow, F. Godman, Esq., and O. Salvin, Esq." (*Trans. Zool. Soc. London*, VI, pp. 378-494, plates 63-87). While Günther dealt largely with marine fishes, he considered the fishes of the Bayano, Chagres, and the rivers, not specifically named, between 7° and 9° N., and 77° and 83° W., in which collections were made by Wagner.

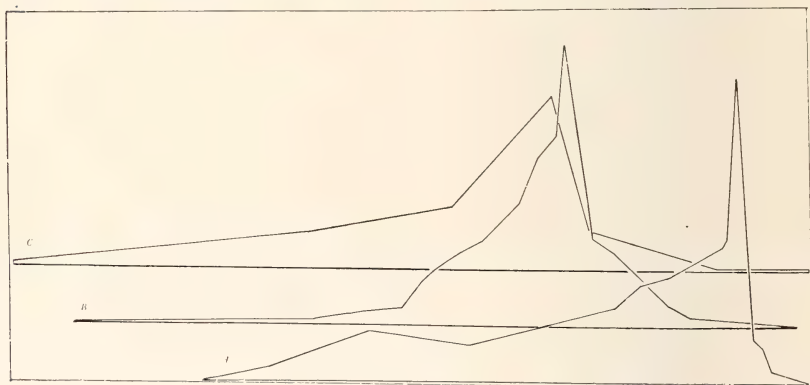


FIG. 1. Sections from tide water on the Pacific side to the Atlantic ends of surveyed ship canals. Adapted from Selfridge, *Reports of Explorations and Surveys to ascertain the Practicability of a Ship-Canal between the Atlantic and Pacific Oceans by Way of the Isthmus of Darien*. Washington, 1874, Plate I.

A. Between tide water in the Rio Lara, a tributary of the Rio Savana and Caledonia Bay.

B. Between the mouth of the Rio Bayano, a tributary of the Chepo and the Gulf of San Blas.

C. Between tide (Pinogana) in the Rio Tuyra basin and the Rio Atrato near Rio Sucio via the Rio Cacarica.

Regan (*Biologia Centrali Americana*, "Pisces", pp. v-xxxii and 1-203, Maps 1 and 2, Plates 1-26) considered all of the fresh-water fishes of the area, incorporating the results of the various studies between Günther's general account and his own excellent volume. Three special studies were made of the fresh-water fishes before the canal united the two slopes. The first two were limited largely to a consideration of the fishes that had been recorded by previous authors before the canal had materially

changed natural conditions. The first one of these is Vaillant's "Contribution a l'Etude Ichthyologique du Chagres" (*Bull. Mus. d'Hist. Naturelle*. 1897, No. 6, pp. 220-223).

The second by myself (*Science*, N.S. XXII, pp. 18-20, July 7, 1905), besides listing the fishes recorded from the two slopes made a plea for a thorow study before the canal should be completed and unite the two faunas. The known facts concerning the fishes were very far from complete. I said in part:

I have just finished a consideration of the geographical distribution of the fresh-water fishes of tropical America and Patagonia as applied to the Archhelenis-Archiplatea theory of von Ihering. The details will appear in one of the volumes of the Hatcher reports of Princeton University.² The evidence there collected indicates that the Pacific slope fauna of tropical America has been derived from the Atlantic slope fauna. It is quite within the range of possibilities that the Atlantic slope fauna ascended the Chagres and succeeded in crossing the low divide and descended the Pacific rivers. The Chagres route has a rival farther south. In Colombia the Cordilleras form four separate chains. The eastern, east of the Rio Magdalena, the central, between the Magdalena and its tributary, the Cauca, the western, west of the Cauca, and finally, a coast range. Between the western Cordillera and the coast Cordillera is a trough whose highest point is but 300 feet above sea level.

In the west Cordilleras to the east of this trough arise two rivers, both of which flow into the longitudinal valley, where one, the Atrato, flows to the north into the Caribbean, the other, the San Juan to the south, and then through a break in the coast Cordilleras to the west to the Pacific Ocean. The height of land separating the two systems scarcely reaches a height of 100 m. This waterway is one of the strategic points in the geographical distribution of South American fishes and it is more than to be regretted that there is not a single record of a fresh-water fish from either of these rivers!

We are a little more fortunate about our knowledge of the fishes of the two sides of Panama, but are far from an exhaustive knowledge on the subject.

It would certainly be a disgrace not to make an exhaustive study of the fresh-water faunas of the two slopes before there is a chance of the artificial mingling of the two faunas. It ought to be urged upon congress to make provision for the biological survey of the canal zone if the president or the bureau of fisheries does not already possess authority to provide for it. The work should be undertaken at once.

For the biological survey of the Atrato-San Juan route we must depend upon private enterprise, and it is to be hoped that the means for so interesting and profitable work will not be lacking when the volunteers for the work are so numerous and willing.³

²"The Fresh-Water Fishes of Patagonia and an Examination of the Archiplatea-Archhelenis Theory". *Reports of the Princeton University Expeditions to Patagonia*, III, 1909, pp. 225-374. Plates XXX-XXXVII. Maps.

³This work was later done by myself and Mr. Charles Wilson. The results have appeared in these *Studies*, No. 46.

As a result of this article and much propaganda, the Smithsonian Institution and the Field Museum undertook a joint survey of the fish fauna of Panama. The survey was not begun until the work on the canal had made many changes in the natural habitat of the fishes, but Meek and Hildebrand's "The fishes of the fresh-waters of Panama" published in *Field Museum Natural History Zoölogical Series*, X, 1916, pp. 217-374, must remain the last word on the distribution of the fresh-water fishes of the canal region before the canal united the waters of the two slopes. They spent two seasons, January to May, inclusive, 1911, and from January to March, inclusive, 1912, in the field and covered the territory from the eightieth meridian to Colombia. I covered rivers from the boundary of Panama south. I have made free use of Meek and Hildebrand's results in the series of articles of which the present paper forms one.

The problem of the origin of the fauna of Panama resolves itself into the questions of the origin of the Pacific slope fauna, particularly that of the Tuyra, and the question of the origin of the fauna of the Chagres.

We may consider first the origin of the Tuyra fauna and then that of the Chagres.

The Atrato-Tuyra Problem. The Atrato plain east of the Tuyra river is very low and extends close to the divide between the Atrato and Tuyra which, at its lowest point, is but about 400 feet high. On the Pacific side the slope is longer, but also for the most part low. About half the distance between the mouth of the Atrato and the Crest is influenced by the tide.

On the easterly side of the Gulf of Panama [but on the Pacific coast] lies the Gulf of San Miguel, which is an excellent harbor, carrying tide water halfway across the isthmus. The Savana River enters this gulf from the north, and the Tuyra River from the southeast, while the Chucunaque, heading near the Chepo and flowing southeasterly, is a tributary of the Tuyra. *Report of the Isthmian Canal Commission, 1899-1901* p. 50.

The lowest point in the divide between the Tuyra and the Atrato given in the Canal Commission's map of this region is 800 feet. The International Railroad Survey gives the pass of Cajon as 400 feet and this is the height given by Selfridge. While this pass or divide is less than 100 feet higher than the Isthmian pass between Atrato and San Juan, the nature of the territory is evidently quite different. The gradient from the Atrato to the San Juan is very gradual.

Concerning the Tuyra-Atrato region Selfridge⁴ says in part, pp. 65-66:

On the Atlantic side the alluvial plain of the Atrato extends close up to the spurs jutting out from the divide, and there is found an amount of level ground that nowhere exists on the other side. This appearance that impressed me so strongly on my first reconnaissance to Paya, coupled with the favorable report of the Pacific slope from previous explorers, gave me strong hopes that our explorations in this part of the Isthmus would be crowned with success.

On the Pacific side our survey from the mouth of the Paya to the Cué as well as up that river, indicated plainly that this whole region is a broken country, traversed by deep ravines and hills of moderate height.

From Chipigana to Santa Maria the country is a flat plain, with a rise in this distance of about 10 feet. From Santa Maria to Pinogona, as also to the mouth of the Cupe within a half mile of the river, it is generally level, with here and there elevations of from 25 to 100 feet. The mouth of the Cupe is 48 feet above the sea.

Above the Cupe the whole characteristics of the country change. A line within half a mile of the river, and often closer, is obliged to cross several ranges of hills, known among the natives as the Paloma, the Tres Veces de Parva, the Paca, and the Loma de Diablo, which vary in height from 250 to 400 feet. Various reconnaissances were made to see if these hills could be turned, but they resulted in only finding still higher ground as one receded from the river. The mouth of the Paya is 144 feet above sea-level, and the Cué 179 feet.

The height of the divide at the point crossed by the survey is 710, and through that of the so-called Cacarica Pass is 410 feet.

On the Atlantic side of the divide the descent is much more abrupt, a fall of 200 feet being met with within a mile of the summit.

The fishes of the Tuyra were made known by Meek and Hildebrand in two papers in *Field Museum Natural History Publications, Zoölogical Series*, X, one issued in 1914, the other in 1918.

Only one paper earlier than these considers the fauna of the Tuyra⁵.

The Atrato-Tuyra faunæ problem is comparatively simple. Fifty species of fishes have been taken in the Tuyra. One hundred and four species are known from the two rivers, of which 19 or over 18 per cent are found in both rivers. Thirty-eight per cent of the Tuyra fishes are found in the Atrato.

⁴Selfridge, in his *Reports of Explorations and Surveys to ascertain the Practicability of a Ship-Canal between the Atlantic and Pacific Oceans by the way of the Isthmus of Darien*, Washington, 1874, gives an account of the region between the Atrato and the Pacific ocean via the Tuyra.

⁵Boulenger, G. A., "Poissons de l'Amerique Centrale. Viaggio del Dott. Enrico Festa nel Darien e regione vicine." *Bollettino, Mus. Zool. Anat. comp. della Univ. di Torino*. XIV, No. 346, April 29, 1899. This paper deals largely with marine fishes in the estuaries along the Pacific side of Darien.

The genera of 20 more Tuyra fishes are represented in Colombia. Concerning the origin of most of the 19 species there cannot be any doubt; they are abundant in the Atrato-Magdalena, and find their farthest north in the Tuyra or at least in the southern half of Panama. They moved from the Atrato to the Tuyra.

Such undoubtedly are *Phanagoniates macrolepis*, *Ageneiosus caucanus*, *Loricaria variegata*, *Curimatus magdalenæ*, *Astyanax fasciatus*, *Ctenolucinus beani*, *Hoplias malabaricus* and *Hypopomus brevirostris*.

It is possible that some species have more recently gone from the Tuyra to the Atrato, but originally all of them went in the other direction. There is no direct evidence that any specifically Pacific slope forms have come over to the Atrato. The tide of migration has all flowed westward. The strictly west-slope things like *Awaous transmontanus* and *Philypnus maculatus* have not come across into the Atrato. A number of species whose ancestors came from the Atrato have become more or less modified in the Tuyra. *Trachycorystes amblops* is a modified *fisheri*, *Pimelodus punctatus* a modified *clarias*.

The species common to the Atrato-Tuyra (18 per cent) as compared with the number of species common to the Atrato and San Juan (30 per cent) may be taken as an inverse measure of the difficulties in crossing from the Atrato to the Tuyra and from the Atrato to the San Juan.

The 11 species of the Tuyra not found in the Atrato or not represented by a species of the same genus are:

1. *Lasiancistrus planiceps*, 2. *Leptancistrus canensis*, 3. *Astroblepus longifilis*, 4. *Apareiodon dariensis*, 5. *Compsura gorgonæ*, 6. *Pseudocheirodon affinis*, 7. *Hemibrycon dariensis*, 8. *Sternarchus rostratus*, 9. *Mollienisia caucana*, 10. *Philypnus maculatus*, 11. *Awaous transmontanus*.

Of these the genera of numbers 1, 3, 4, 7, 8, 9, 10, and 11 are found in the Magdalena or the San Juan and will most probably be found in the Atrato between the two. *Leptancistrus* is derived from *Lasiancistrus*, *Compsura* and *Pseudocheirodon* from *Cheirodon*, both found in Colombia. The genera of numbers 1 to 8 find their farthest north in Panama.

Every consideration shows the close affinity of the Tuyra fauna to that of the Atrato, from which it has in large part been derived.

The Chagres Problems. The completion of the Panama Canal has greatly modified the Chagres basin and merged it with

that of the Rio Grande on the Pacific side. It is, therefore, a matter of satisfaction that Meek and Hildebrand made a thorough examination of this region before the canal was completed.

Forty-four species of fresh-water fishes were taken from the Chagres before the canal was cut. Of these, 3 species are peculiar to the Chagres. They are members of widely distributed genera. *Creagrutus notropoides* of the Chagres is scarcely, if at all, distinct from *C. affinis*; *Brycon chagrensis* differs but little from *B. striatulus* of the Pacific side; *Nectroplus panamensis* is the southernmost one of three species of this genus. The species of the Chagres are distributed among the following ten families:

	Number of Species	Number of Genera
1. Siluridæ (Pimelodinæ).....	2	2
2. Loricariidæ (Plecostominæ).....	3	3
(Loricariinæ).....	1	1
3. Characidæ (Cheirodontinæ).....	2	2
(Tetragonopterinæ).....	4	4
(Bryconinæ).....	2	1
(Glandulocaudinæ).....	1	1
(Characinae).....	1	1
(Piabucinæ).....	1	1
(Erythrinæ).....	1	1
4. Gymnotidæ.....	1	1
5. Poeciliidæ.....	8	5
6. Mugilidæ.....	3	2
7. Atherinidæ.....	1	1
8. Centropomidæ.....	1	1
9. Cichlidæ.....	4	4
10. Gobiidæ.....	9	8

It will be noted that the Chagres contained no representatives of such Palearctic families as the minnows, suckers, Ameiurine cat fishes, sunfishes, perches and darters, salmon or trout, sturgeons, etc. These families find their farthest south very largely north of Guatemala.

The 10 families belong to several distinct ecological groups. The Gobiidæ, Atherinidæ, Mugilidæ, Centropomidæ, and Poeciliidæ are families with both fresh-water and marine species. The fresh-water genera of these families are largely confined to Central America, the Gobiidæ finding their optimum about Panama

The Pœciliidæ and fresh-water Mugilidæ are more distinctly Central American types than the Gobiidæ, and the Chagres certainly got some of its genera of these families from the north, either by sea or by land. None of the genera of these families find their farthest north in the Chagres and only a few of the genera of the Pœciliidæ extend farther south than Panama. Their ancestors most probably came from the north.

Remain then the Siluridæ, Loricariidæ, Gymnotidæ and Cichlidæ.

Of the Siluridæ, *Rhamdia wagneri* and *Pimelodella chagresi* represent the farthest north of genera everywhere on the Atlantic slope from Buenos Aires north and on the Pacific slope at least from Guayaquil north. The ancestors of these species undoubtedly came from the south. The Chagres species are common at least as far south as the Magdalena.

The Loricariidæ flourish everywhere in South America north of Guayaquil and Buenos Aires and the ancestors of all four of the Chagres species came from the south and found their farthest north in the Chagres. Only one member of the family, *Ancistrus aspidolepis*, has gotten as far as northern Panama.

Of the Characidæ, the Cheirodontinæ⁶, Piabucinæ, and Erythrininæ find their farthest north in the Chagres. The Glandulocaudinæ reach Costa Rica; the Bryconinæ and Characinæ reach Guatemala. Only the Tetragonopterinæ attain the United States. The Chagres undoubtedly got the ancestors of all of its Characins from the south.

The Cichlidæ have undergone an elaborate evolution in Central America and Mexico as well as in South America, and there is evidence that the Cichlid fauna of the Chagres came in part from the north and in part from the south. The genera *Geophagus* and *Aequidens* universally distributed between Buenos Aires and Colombia find their farthest north in the Chagres, and the ancestors of *Geophagus crassilabris* and *Aequidens coeruleopunctatus* came from the south. The genus *Neetroplus*, on the other hand, is a Central American product. One species inhabits Nicaragua, one Costa Rica, and the third the Chagres. The genus reaches its farthest south in the Chagres, and the ancestors of *Neetroplus panamensis* may very well have come from the north. The same is true of *Cichlasoma maculicauda*, which finds its farthest south in the Chagres.

⁶With one exception?

Viewing the composition of the Chagres fauna from a little different angle, we find that there are 38 genera of fishes in the Chagres and that 28 of these are also found in the Atrato or Magdalena. Two genera, *Compsura* and *Pseudocheiroidon*, found in all the Panama rivers have closely related genera in the Atrato and Magdalena from which their ancestors no doubt came. Six of the 28 genera—*Gambusia*, *Priapichthys*, *Mollienisia*, *Poeciliopsis*, *Joturus*, and *Neetroplus*—came from the north, altho the first 3 now extend into the Atrato-Magdalena. *Menidia* is a marine genus with species in the fresh waters in numerous places and came from the ocean. Four are lowland or brackish-water genera of the *Gobiidæ*, which are found largely in Panama.

As far as the genera give any indication, the Chagres fauna is composed of about 70 per cent derivatives from the south, about 16 per cent derivatives from the north. The rest of the fauna is composed of derivatives from the ocean.

Eighteen, or about 40 per cent of the Chagres species were found in the small streams opposite the Chagres emptying into the Pacific. Forty-three per cent are also found in the Chepo basin, 27 per cent in the Tuyra, and 18 per cent in the Atrato.⁷ The drop in percentage from the Chepo to the Tuyra is due to the fact that some northern species stop at the Chepo and do not extend into the Tuyra (*Gambusia episcopi*, *Mollienisia sphenops*, *Joturus pichardi*) and to the fact that some Chagres-Chepo species are replaced by other species of the same genera in the Tuyra (*Piabucina panamensis* by *festæ*, *Hoplias microlepis* by *malabaricus*, *Priapichthys tridentiger* by the variety *cana*).

The Chagres is the meeting-place of three streams of migration, the largest from the south, a smaller one from the north, and another from the ocean.

The Chagres fauna having come largely from the south, a supplementary question is, Did it arrive by land or by sea?

The Chagres drains into the Caribbean Sea. The nearest large rivers to the south draining into the Caribbean are the Magdalena and the Atrato. The Magdalena basin is much the larger of the two and contains a much more varied fauna than the Atrato. The bulk of the Atrato fauna came from the Magdalena.

If the region between Buenaventura and the canal should be depressed by 400 feet, the Atrato and San Juan valleys would be converted into a channel, and so would the Canal Zone. Large

⁷Most of the 18 per cent are included in the 27 per cent of the Tuyra and 43 per cent of the Chepo.

parts of the Tuyra and Mamoni basins would be submerged. This condition may have obtained during the lifetime of some of the present species and it may be argued that the migration from the Magdalena to the Atrato and Chagres has been very recent. Its beginning may, however, have antedated the last submergence, the species having been preserved in the higher tributaries of the rivers. Leaving this speculation aside and assuming that the present distribution has developed during the present configuration of the country, did the Chagres fauna arrive by land or by sea or by both routes? The answer to this question ought to give us an index to the general question of the migration of fresh-water faunas over land and sea.

The Atrato pours a large amount of fresh water into the Gulf of Darien, which ought to facilitate the migration of fresh-water fishes between this gulf and the Chagres. But a comparison of the faunas of the Atrato, Tuyra, Chepo, and Chagres shows that only *Hypessobrycon panamensis* got into the Chagres that, as far as we know now, did not also get into the Tuyra and Chepo.

Many species crossed the divide between the Atrato and the Tuyra. As stated above, of the 50 species in the Tuyra, 19 are still found in the Atrato, and the genera of 20 more are represented in Colombia. Some species coming from the Atrato got no farther than the Tuyra, but 11 of the 19 species that presumably went from the Atrato to the Tuyra got into the Rio Chepo. Sixteen more of the Chepo's 37 species probably came from the Tuyra.

Of the 10 species in the Chepo not found in the Tuyra, *Hoplias microlepis* reappears in Guayaquil, 6 find their farthest south in the Chepo, the other 3 belong to the Pacific slope Gobiidæ, some of which are found far south of the Tuyra and will probably be found in it.

Five of the 19 species that presumably went from the Atrato to the Tuyra and Chepo arrived unchanged in the Chagres; *Rhamdia wagneri*, *Pimelodella chagresi*, *Chaetostomus fischeri*, *Piabucina panamensis*, and *Hypopomus brevirostris*. Several more of the Tuyra species not directly from Atrato are unchanged in the Chagres.

A number of species of the Tuyra, Chepo, or the Pacific slope opposite the Chagres have closely related species in the Chagres. Such pairs are *Ancistrus spinosus* and *chagresi*; *Ræboides occidentalis* and *guatemalensis*; *Brycon striatulus* and *chagrensis*; *Brycon argenteus* and *petrosus*; *Creagrutus affinis* and *notropoides*; *Dormitator latifrons* and *maculatus*; *Eleotris picta* and *pisonis*;

Awaous transandeanus and *taiasica*. Four other species from the Atrato, Tuyra, and Chepo reach the Pacific slope west of the Chagres, but as far as is known did not reach the Chagres. They are *Curimatus magdalenæ*, *Astyanax fasciatus*, *Ctenolucinus beani*, and *Thoracocharax maculatus*.

A glance at the detailed list given below will show that a number of species find their farthest north in the Chepo basin. Others have not succeeded in passing north of the Tuyra, as if their line of migration had been stopped at one or another of these rivers.

It is a remarkable fact that while 12 of the 23 species of strictly fresh-water families, the Characidae, Siluridae, Loricariidae, Gymnotidae, and Cichlidae have crossed the divide at Panama, only *Sicydium salvini* of the 15 species of the marine and lowland Gobiidae is identical on the two sides. It would seem that the marine or lowland forms have been separated long enough to become specifically distinct on the two sides and that the intrusion and intermigration of the strictly fresh-water species has been more recent. The isthmus may have been a barrier to the intermigration of marine forms long before it became suitable for colonization by fresh-water species which have not been long enough in the area to become altogether distinct on the two sides. It is also quite probable that a certain amount of intermigration from river to river is still taking place.

There is a very great probability that all of the immigrants of the Chagres from the south except the Atlantic slope *Eleotridinae* (Gobiidae) followed the route Atrato, Tuyra, Chepo (Grande?), Chagres, altho this involved two crossings of the continental divide. Only the partly marine *Eleotridinae* came by way of the ocean, and possibly *Hyphessobrycon panamensis*.

It appears that the ocean served to a very small extent as a highway for the migration of fresh-water fishes, even for such a short distance as that between the Atrato and Chagres.⁸ It is a separate question whether the ocean with its high tides and the long tidal areas of the Tuyra and Chepo facilitated the migration from the Tuyra to the Chepo and Rio Grande.

⁸This conclusion is re-enforced by the fact that aside from members of the Gobiidae the only fresh-water fish that got from the Tuyra to the San Juan or the reverse without getting into the intermediate Atrato is *Astyanax ruberrimus*, which also went as far south as the Rio Patia.

The Distribution of the Fresh-water Fishes between the Canal Zone and the Atrato

	Costa Rica	Chagres	Pacific slope ⁹	Chepo	Tuyra	Atrato ¹⁰	Remarks
<i>Rhamdia wagneri</i> (Günther)	—	—	—	—	—	—	
<i>Pimelodus clarias</i> Bl.							
<i>Pimelodus clarias punctatus</i> (M. and H.)							
<i>Pimelodella chagresi</i>							
<i>Trachycorystes amblops</i> (M. and H.)							
<i>Agoniosus caucanus</i>							
<i>Plecostomus plecostomus panamensis</i> E.							
<i>Chaetostomus fischeri</i> St.		11	—	—	—	—	fisheri in Atrato
<i>Aneistrus spinosus</i> H.			12	—	—	—	Genus in Magdalen
<i>Aneistrus chagresi</i> E. and E.		—	—	—	—	—	centrolepis in Atrato
<i>Lasiancistrus planiceps</i> (M. and H.)				—	—	—	Genus in the Magdalena
<i>Leptoancistrus canensis</i> (M. and H.)				—	—	—	
<i>Loricaria uracantha</i> (K. and S.)			13	—	—	—	
<i>Loricaria filamentosa latifura</i> E. and V.				—	—	—	
<i>Loricaria variegata</i> St.				—	—	—	
<i>Loricaria capetensis</i> M. and H.				—	—	—	
<i>Loricaria fimbriata</i> E. and V.				—	—	—	
<i>Sturisoma panamensis</i> (E. and E.)				—	—	—	

							Genus in Magdalena = longifilis? in Magdalena basin
Sturisoma citreus M. and H.	—	—	—	—	—	—	
Hoplosternum punctatum H.	—	—	—	—	—	—	
Astrolepis pirrense (M. and H.)	—	—	—	—	—	—	
Pygidium striatum (M. and H.)	—	—	—	—	—	—	
Curimatus magdalenae St.	—	—	—	—	—	—	
Aparicodon darcensis (M. and H.)	—	—	—	—	—	—	
Phanagoniates macrolepis (M. and H.)	—	—	—	—	—	—	
Compsura gorgone (F. and G.)	—	—	—	—	—	—	
Pseudochirodon affinis (H.)	—	—	—	—	—	—	
Gephyrocharax atricaudata (M. and H.)	—	—	—	—	—	—	Genus in Atrato
Gephyrocharax intermedius (H.)	—	—	—	—	—	—	
Astyanax fasciatus (C.)	—	—	—	—	—	—	
Astyanax ruberrimus E.	—	—	—	—	—	—	
Bryconamericus emperador E. and V.	—	—	—	—	—	—	Genus in Atrato
Bryconamericus cascadenensis H.	—	—	—	—	—	—	Genus in Magdalena
Hemibrycon darcensis H.	—	—	—	—	—	—	
Hyphessobrycon panamensis Durbin	—	—	—	—	—	—	
Thoracocharax maculatus (St.)	—	—	—	—	—	—	
Creggutus notropoides M. and H.	—	—	—	—	—	—	
Creggutus affinis St.	—	—	—	—	—	—	
Rueboides guatemalensis (Günther)	—	—	—	—	—	—	Genus in Atrato
Rueboides occidentalis H.	—	—	—	—	—	—	
Brycon striatulus (Kner)	—	—	—	—	—	—	Genus in Atrato
Brycon chagrensis (Kner)	—	—	—	—	—	—	
Brycon petrosus M. and H.	—	—	—	—	—	—	

^aThis column includes the territory from north of the Chepo to the Rio Chame north of the Canal Zone.

^bThis column contains only those of the Atrato species which are also found in the Tuira.

^cVery rare on the Atlantic side.

^dOn the Pacific side in the Chorrera only.

^eGünther records this from the Pacific side.

The Distribution of the Fresh-water Fishes between the Canal Zone and the Atrato—Continued

	Costa Rica	Chagres	Pacific slope ⁹	Chapo	Tuyra	Atrato ¹⁰	Remarks
Brycon argenteus M. and H.							
Piabucina panamensis Gill.							
Piabucina festæ Boulenger.							
Ctenolucius beani (Fowler)							
Hoplias malabaricus Bloch.							
Hoplias microlepis (Günther)							
Gymnotus carapo L. not taken							
Sternopygus dariensis H.							found both north and south Genus in Atrato
Hypopomus brevirostris (St.)							
Eigenmannia virescens (Val.)							Genus in Magdalena
Sternarchus rostratus M. and H.							Brackish water to Mexico
Gambusia nicaraguensis G.			?				Panama only
Gambusia episcoopi St.							south to Porto Bell
Gambusia cascajalensis M. and H.							Panama only. Genus in Atrato
Priapichthys tridentiger (Garman)							Tuyra only
Priapichthys tridentiger cana M. and H.							Panama only
Priapichthys dariensis (M. and H.)							Panama only
Priapichthys panamensis H.							Panama only
Poeciliopsis elongatus (Günther)							Panama only

<i>Peciliopsis isthmensis</i> Regan.....	14—	—	—	—	Panama only
<i>Mollenisia sphenops</i> (C. and V.).....	—	—	—	—	to Mexico and Cartagena
<i>Mollenisia caucana</i> (St.).....	—	—	—	—	to the Cauca
<i>Mollenisia cuneata</i> (Garman) not seen.....	—	—	—	—	Gulf of Darien
<i>Mollenisia formosa</i> (Girard) not seen.....	14—	—	—	—	to Mexico
<i>Rivulus elegans</i> St.....	—	—	—	—	to R. Cauca and San Juan
<i>Rivulus brunneus</i> M. and H.....	—	—	—	—	Toro Point
<i>Mugil inellus</i> G.....	—	—	—	—	West Indies and Lower California
<i>Agonostomus monticola</i> Bancroft.....	—	—	—	—	Guatemala
<i>Agonostomus macracanthus</i> Regan.....	—	—	—	—	Cuba, Costa Rica, etc.
<i>Joturus pichardi</i> Poey.....	—	—	—	—	
<i>Menidia chagresi</i> M. and H.....	—	—	—	—	
<i>Centropomus parallelus</i> Poey.....	—	—	—	—	
<i>Centropomus ensiferus</i> P.....	—	—	—	—	
<i>Aequidens coeruleopunctatus</i> (K. and St.).....	—	—	—	—	Genus in Atrato
<i>Geophagus crassilabris</i> St.....	—	—	—	—	Genus in Atrato
<i>Cichlasoma maculicauda</i> Regan.....	—	—	—	—	To Guatemala
<i>Cichlasoma tuyenense</i> M. and H.....	—	—	—	—	New Granada, west slope Panama
<i>Cichlasoma sieboldii</i> (K. and St.) not seen.....	—	—	—	—	
<i>Cichlasoma calobrense</i> M. and H.....	—	—	—	—	
<i>Cichlasoma umbriferum</i> M. and H.....	—	—	—	—	
<i>Neotrophus panamensis</i> M. and H.....	—	—	—	—	
<i>Philypnus dormitor</i> Lacépède.....	—	—	—	—	
<i>Philypnus maculatus</i> (G.).....	—	—	—	—	Genus in Magdalena
<i>Dormitator maculatus</i> Bloch.....	—	—	—	—	
<i>Dormitator latifrons</i>	—	—	—	—	

¹⁴This column includes the territory from north of the Chepo to the Rio Chame north of the Canal Zone.

¹³This column contains only those of the Atrato species which are also found in the Tuyra.

¹⁴On Atlantic side but not in Chagres.

The Distribution of the Fresh-water Fishes between the Canal Zone and the Atrato—Continued

	Costa Rica	Chagres	Pacific slope ⁹	Chepo	Tuyra	Atrato ¹⁰	Remarks
<i>Eleotris pieta</i> (K. and St.).....							
<i>Eleotris pisonis</i> (Gmelin).....							
<i>Eleotris isthmensis</i> H.....							
<i>Guavina guavina</i> (C. and V.).....							
<i>Leptophilypnus fluviatilis</i> H.....							
<i>Microeleotris panamensis</i> H.....							
<i>Microeleotris mindii</i> H.....							
<i>Hemieleotris latifasciatus</i> (M. and H.).....							
<i>Awaous taiasea</i> (Licht.).....							
<i>Awaous transandeanus</i> (Günther).....							
<i>Sicydium salvini</i> Grant.....							

⁹This column includes the territory from north of the Chepo to the Rio Chame north of the Canal Zone.

¹⁰This column contains only those of the Atrato species which are also found in the Tuyra.

The Origin of the Central American Fishes. There is some evidence that Central America got at least some of the ancestors of its South American types by another than the Panama route.

Gymnotus and *Symbranchus*, abundant in South America to Guiana and Colombia, are also found in Guatemala but have not been found in Costa Rica or Panama. The great development of Cichlids in Mexico and Central America may indicate that this family got into Central America before the present bridge of Panama came above the ocean.

A comparison of the first three columns will show how very few of the fishes of southern Panama extend into Costa Rica.

The Magdalena Basin and the Horizontal and Vertical Distribution of Its Fishes

By CARL H. EIGENMANN

THE Magdalena basin lies in western Colombia and drains the entire area of Colombia between the Cordillera of Bogota, also called Oriental, and the Cordillera Occidental except a small corner south of Popayan. Its western boundary consists of the oldest (Occidental) Cordillera which extends from Cartagena the entire length of the continent to Cape Horn. Nowhere in Colombia does it reach the height attained by it south of Colombia. Its eastern boundary consists of the much higher eastern crests of the Cordillera of Bogota. The Cordillera Central separates the Magdalena valley proper from the Cauca valley. The Cordillera Central is older than the Cordillera of Bogota, hence the Cauca flowing between the oldest chains in Colombia must be the oldest part of the Magdalena basin.

The Magdalena basin is surrounded by high mountain barriers except in the northwest where low areas separate it from the basins of the Sinu and of the Atrato beyond. It is the reservoir from which the Atrato and thru the Atrato the San Juan to the south and the Tuyra, Chepo, and Chagres to the west and north, got part of the ancestors of their present fresh-water fish fauna. Where did the Magdalena get its fishes?

Physical Features of the Magdalena Basin. The Magdalena basin may conveniently be divided into five sections: (1) the Andean torrents flowing from the heights to the valleys; (2) the Upper Cauca; (3) the Upper Magdalena; (4) the Lower Magdalena; and (5) the Cesar.

The Cauca and the Magdalena rise near the second degree of North latitude. They unite near 9° 30' North latitude and empty near 11° north into the Caribbean Sea.

Veatch (*Quito to Bogota*, 1917) says of the Cauca:

The three great physiographic provinces between the Cordillera del Choco (Occidental) and the Cordillera del Quindio (Central) are thus:

First—The inter-mountain plains of the present Departments of Cauca and Valle del Cauca which occupy the first 250 miles of the depression.

Second—The region of hills and valleys which lie between the two chains along the Cauca River in the Departments of Caldas and Antioquia. The Cauca River, after traversing a portion of the southern plains, flows in this second division of the inter-mountain depression through a series of gorges.

Third—The river-plain of the lower Cauca, in north-central Antioquia and southern Bolivar, which, bounded by the gradually disappearing spurs of the mountains, soon amalgamates with the great low plain of the Magdalena River.

The southern plains (part first, above) area of this inter-mountain depression is divided into three parts: the Plain of the Patia, the Plain of Popayan, and the Plain of Cali. The Plain of the Patia occupies the southern quarter of this area, the Plain of Popayan the next quarter and the Plain of Cali the northern half. The last is thus about 125 miles long and 15 miles wide.

Of these, the plain of Popayan, with a mean elevation of about 6,000 feet, is the highest, and contains the divide between the waters of the Atlantic and the Pacific. However, there is no marked hill mass between the two drainage basins, such as we had inferred from published maps and accounts, and one of the surprises of the journey was to find that in the Plain of Popayan we had crossed from the tributaries of the Rio Patia, which flows into the Pacific thru a great gorge in the Western Andes at the very southern end of the Plain of the Patia, to the tributaries of the Rio Cauca, which flows into the Atlantic by way of the hill country of Antioquia, without having appreciated that we had passed across the hydrographic divide between the two oceans. One would naturally expect in the Andes of South America that the divide between two great river systems, tributary to different oceans, would be a marked mountain crest, and it is perhaps this wholly natural preconception which has led to the showing on a number of maps of such a mountain range across this plain between the head-waters of the two streams and has caused rather misleading statements in many geographic descriptions.

We found the divide to occur here in a rolling plain where the low elevation between the two river systems is of less topographic importance than the elevations between certain tributaries of either river. Looking across the plain from either of the mountain slopes, it would be impossible to say with certainty, in many cases, which little tributary belongs to the Cauca and which to the Patia. The line of this inter-oceanic divide crosses the plain of Popayan in an east-west direction. On the west it mounts to the summit of the Western Andes and then turning abruptly northward, follows it very closely on the western side of the plains area; while to the east it climbs the other chain, and turning abruptly south, follows the summit of the mountains on the east side of the Popayan and Patia Plains.

There is in this general plains-region the suggestion of a remnant of a cross-range, but it does not lie between the Cauca and Patia drainages, but near the northern end of the Plain of Popayan, and a number of miles north of the head-waters of the northward flowing Cauca. It is somewhat near the boundary between the Plains of Cali and Popayan, but the separation of these into distinct units rests on a marked difference in elevation rather than on this feature. Perhaps at one time in the geologic past this remnant of a

cross-range was an important feature in the drainage systems of this region, and while it is certainly not so to-day, its presence adds but another feature to the physiographic history of the Cauca River, which will some day be unravelled.

The Plains of Cali and Patia lie some 3,000 feet below the Plain of Popayan, and the latter is therefore deeply trenched towards its northern and southern borders by the streams which cross it on their way to these lower levels. The Plain of Cali has suffered very little erosion. It is slightly concave, sloping up to the mountains on either side, and between its southern end, thirty miles south of Cali, and its northern limit, near Cartago, it has a slope of about four feet per mile, and may be regarded as a plain between 3,000 and 3,500 feet above sea-level. The Cauca River flows through the Cali Plain from end to end, and the levelness of the land, together with the gentle rainfall and the healthy warm character of the region, have all combined to cause it to be regarded as one of the garden spots of Colombia.

North of Cartago the Cauca flows thru the knot formed by the union of the Western and Central Cordilleras. In 110 miles, between Cartago and Boca de Nechi it drops from an elevation of 3,000 to 500 feet and forms, with the lower Magdalena, No. 4 of the above regions.

The Magdalena descends rapidly from its sources to Neiva, which has an elevation of 1,442 feet. From Neiva near 3° North it descends more gradually to Girardot, at 1,056 feet, and Beltran or Ambalema, 774 feet near 5° North. Between Beltran, Honda, and La Dorado there are rapids where the river cuts its way out from a trough in the Cordilleras of Bogota to the plain between the Central Cordilleras and the Cordilleras of Bogota. This lower Magdalena (below 600 feet) with the Cauca below Boca de Nechi forms No. 4 in the present classification. No. 5, the Rio Cesar, rises in the southeastern part of the Sierra Nevada de Santa Marta, flows a little west of south and empties into the Magdalena at El Banco. It is the only stream in Colombia with a southward flow that finally enters the Atlantic.

The Fishes of the Magdalena Basin. In the lower Magdalena (No. 4), collections have been made in the Cienega near the mouth of the Magdalena, at Caceres on the Cauca, and at Bodega Central for Steindachner and at Soplaviento, Calamar, and at various places to Honda during my reconnaissance of Colombia. It is from this part of the river that Humboldt probably got his notes of the fishes mentioned in *Recueil d'Observation de Zoölogie et Anatomie*. Nothing is known from the Rio Cesar. In the Upper Magdalena the only collection was made at Girardot. In the Upper Cauca I collected in the Plains of

Cali in tributaries of the Cauca, at Boquilla, Piedra Moler, Cartago, Paila, Cali, and in the Cauca itself at the port of Cálí.

From the torrential mountain tributaries, collections were made at St. Agustin for the British Museum; in a line from Honda to Bogota, on the Plains of Bogota, in a line from Bogota thru Santander¹, all during and for my Reconnaissance of Colombia; in the Santa Marta Mountains by the party of the University of Michigan; at Ibagué and Toche, by myself; at Popayan by Humboldt; and in Antioquia by parties of the American Museum of Natural History.

Our knowledge of the fauna is still deficient for all of these regions, more particularly the upper Magdalena, the rapids of the Cauca, the torrential streams of the Western and Central Cordilleras. Nothing is known concerning the fauna of the Cesar.

In a system as large as the Magdalena there are many units of environment each of which has its own complement of species. Not all of them unique, to be sure, but nevertheless containing a per cent of uniques. The sum of the faunas of many such units is very probably greater than the number of species found in a smaller river system. The number of species in a given stream is proportional to the size of the system to which it belongs.

The Magdalena fauna is more like that of the Orinoco than the Guayas fauna of Ecuador is like that of the Magdalena. The resemblance is five times greater if the number of identical species is taken as a criterion.

There are one hundred and fifty-odd species belonging to seventy-odd genera of fresh-water and brackish-water fishes known to occur in the Magdalena basin.

Of these the common eel and the tarpon were contributed by North America thru the Caribbean Sea. The tarpon found in the Caribbean Sea and Gulf of Mexico enters many of the rivers discharging into them.

The common eel of North America descends the ocean to spawn. The young enter the rivers. So far but one small specimen collected by the Expedition from the University of Michigan has been found in the Magdalena or as far as that goes from any of the rivers of South America. It was a stray.

Gambusia, Mollienia, Agonostomus, and four genera of the Eleotridinæ, possibly also Rivulus, were contributed by Central America.

¹The fishes in this area were considered in "The Fish Fauna of the Cordillera of Bogota." *Journ. Washington Acad. Sci.*, X, pp. 460-468, 1920.

Several genera pertain to the Andes and may be autochthonous or may have come from the south. *Astroblepus* is a high Andean genus forming the family *Astroblepidæ* found in Venezuela, Colombia, Ecuador, and Peru, possibly also parts of Bolivia. Several species are found in the Magdalena basin. The genera *Lasiancistrus*, *Pseudancistrus*, and *Chætostomus* of the *Loricariidæ* or mailed catfishes have nearly the same distribution as *Astroblepus* but do not reach such great altitudes. One species of each genus is found in the Magdalena basin. The genus *Pygidium* is a swift-water mountain genus distributed from southern Panama to Guiana and south to Rio Grande do Sul and Patagonia wherever high altitudes or swift water form a suitable environment for it. Several species are found in different parts of the Andes within the Magdalena basin.

Fifty-odd genera in the Magdalena basin, 76 per cent, are also found east of the easternmost Cordilleras.

The rest are either peculiar to the Magdalena basin or to the Magdalena-Atrato-Chagres-San Juan. These are in detail:

Xyliphius confined to the upper Magdalena is an offshoot of *Bunocephalus*, a genus widely distributed from the Atrato to Paraguay but not yet caught in the Magdalena. *Cetopsorhamdia* and *Nannorhamdia* are catfishes derived from *Pimelodella*—like *Pimelodina*, which are found abundantly in our area as well as east of the Andes.

Eremophilus, confined to the plain of Bogota, is an offshoot from *Pygidium*. It is a *Pygidium* without ventrals.

Grundulus, also confined to the plain of Bogota, is a member of the *Cheirodontinæ* abundantly distributed in western Colombia as well as all thru the east.

Genycharax of the Cauca is either a derivative of *Charax* or of *Astyanax*, both of which have a universal distribution in tropical America.

Microgenes and *Argopleura* are derivatives of *Bryconamericus*, the latter found also in the Atrato and San Juan.

Acestrocephalus replaces *Acestrorhamphus* of the east. *Ctenolucinus* replaces *Xyphostomus*.

Gilbertolus is an offshoot from *Charax*.

Othonophanes is derived from *Brycon* if distinct.

There are no genera in all of these peculiar to the Magdalena which might not equally well have developed anywhere east of the Andes. *Genycharax* and *Gilbertolus* offer the greatest difficulty. While some of them are highly interesting, even thrilling

to the naturalist, none of them are out of the ordinary evolution of genera elsewhere in tropical South America.

This brings us to the genera also found east of the Andes. A few of these belong primarily to Venezuela and the Guianas. They are:

Creagrutus, found along the eastern base of the Andes from the Rio Beni to Lake Valencia and even British Guiana.

Gephyrocharax but recently discovered about Lake Valencia. Its place of greatest abundance is western Colombia.

Hemibrycon is found as far as Trinidad.

Panaque and *Hemicetopsis* are also found in the Amazon. All of the rest of the numerous genera enjoy a universal distribution east of the Andes.

It would scarcely be possible to isolate any place as large as the Magdalena basin anywhere east of the Andes and north of the La Plata that would not contain all of the rest of the genera.

The question arises whether isolation by the formation of a barrier is not the natural, most probable explanation of the present Magdalena fauna.

It is quite out of the question to transport all of these genera over the present barrier formed by the Cordilleras of Bogota, especially if we consider that the Cauca has not been able to contribute anything to the Dagua or Patia over a divide much lower. Either the Cordillera of Bogota is younger than the Magdalena and its growth cut off the Magdalena area with its fauna from a general lowland mass extending eastward from the Cordillera Central or there has existed a possible route of migration perhaps via Lake Maracaibo. The segregation could not have taken place very recently, for in most cases the species are distinct on the two sides of the Cordilleras. The segregation took place before the lifetime of most of the present species. It is, nevertheless, startling that about 20 per cent of the species of the Magdalena are also found east of the Andes.

The species found on both sides of the Cordilleras of Bogota follow. Those marked with a star were taken between Bogota and Barrigon.

Pseudopimelodus zungaro (H.)

**Rhamdia sebæ* C. and V.

**Pimelodus clarias* (Bl.)

*?*Pimelodella chagresi* (St.)

Pseudoplatystoma fasciatum (L.)

Sorubim lima (Bl. and Seh.)

- Ageneiosus dentatus* (K.)
Astroblepus cyclopus (H.)
**Astroblepus grimaldii* H.
**Astroblepus longifilis* (St.)
**Corydoras melanotaenia* R.
**Pseudancistrus daguae* (E.)
*? *Pseudancistrus pediculatus* (E.)
? *Sturisoma aurea* St.
* *Sturisoma leightoni* (R.)
Curimatus magdalenae St. In Maracaibo only east of the Cordilleras.
Parodon suborbitalis C. and V. In Maracaibo.
? *Abramites eques* (St.)
Leporinus striatus K.
Characidium fasciatum R.
Pyrrhulina semifasciata R.
Hyphessobrycon inconstans (E. and O.)
Astyanax fasciatus (C.)
* *Creagrutus beni* E.
Roeboides dayi St.
? *Ctenolucinus insculptus* St. In Lake Maracaibo?
* *Hoplias malabaricus* (Bl.)
* *Gymnotus carapo* L.
* *Sternopygus macrurus* (Bl and Sch.)
Eigenmannia virescens (V.)
Hypopomus brevirostris St.
Synbranchus marmoratus Bl.
Tarpon atlanticus (C. and V.)
Plagioscion surinamensis (Bl.)

One looks in vain for any common physical character in this series of species. Some are huge fishes, *Pseudoplatystoma*; others are very small, *Characidium*. The great majority are fishes of the lowlands (1,000 feet and less) and comparatively quiet waters. Such fishes as *Astroblepus* and *Pygidium* ought perhaps to be excluded, since they are found at the very highest localities where an occasional crossover may still be expected. At the other extreme such species as the *Tarpon* which enter the sea might also be excluded, and in fact those found on both sides in estuaries only are not given.

Leaving these out of count, the one thing most of them have in common is their very wide distribution. This signifies either facility in getting about or a greater staying quality of their specific characters under varying environments, or both. Parallel forms have developed in nearly all of the genera found on the two sides in which the species have not remained the same. It would take us too far to go into all of these.

That the similarity on the two sides is not of very recent date is shown by an examination of the fauna at the eastern base of the Andes. Very little is known of the fauna of eastern Colombia and western Venezuela. What we do know of it indicates that the Maracaibo fauna is probably identical with the Magdalena fauna, *i.e.* differs no more from it than the latter differs from the Atrato fauna. Almost all we know of Lake Maracaibo was recorded by Cuvier and Valenciennes. I have had recent opportunities to examine the fishes from and about Barrigon, Villavicencio, and the Llanos to the northeast of them. I find that a number of genera of wide eastern distribution which have not been found in the Magdalena basin come up to the base of the Cordilleras east of Bogota. They are Chasmocranes, Imparfinis and Sciades, three catfishes; Erythrinus, Copeina, Hemigrammus, Moenkhausia, Knodus, Creatochanes, Stevardia, Acestrorhynchus, all Characins; Apistogrammus, and Crenicichla of the Cichlidæ. All of them are widely distributed in the east. Did they develop in the east since the formation of the Cordilleras of Bogota or have they migrated to the base of these Cordilleras after they had become an effective barrier? Other conspicuous absentees in the Magdalena are genera of wide distribution in the east which have not been found near the base of the Andes of Colombia. They are the genera of the Hemiodinæ, Nannostomus, Tetragonopterus, the Agoniatinæ, the Stethaprioninæ, Serrasalmoninæ, Mylinæ, Acestrorhamphus, all of which belong to the Characidæ, Pachyurus of the Sciænidæ, Chætobranchopsis and Cichla of the Cichlidæ, Electrophorus the electric eel, the gigantic Arapaima, and the ancient Osteoglossum.

It would be desirable in pursuit of a possible further study of the origin of the Magdalena fauna to make collections in the Maracaibo basin and thence east by way of the Pass of Hato, 800 feet into the Orinoco basin.

A comparison of the genera in the upper Cauca above the rapids of Antioquia and in the Potaro river of Guiana above the Kaieteur fall shows that the two regions have but three genera in common. They are Pygidium, Astyanax, and Rivulus, all genera of the very widest distribution in the whole of South America. The species of the three genera are different in the Cauca and the Potaro. In other respects the faunæ of the Cauca and the Potaro are very different.

Table of Distribution of the Fishes of the Magdalena Basin

	Marine fishes entering mouth of river	Lower Magdalena	Upper Magdalena	Cauca	Torrents and high altitude ²
1. <i>Potamotrygon magdalenæ</i> (D.)	—	—	—		
2. <i>Xyliphius magdalenæ</i> E.			—		
3. <i>Hexanematichtys assimilis</i> (G.)		—	—		
4. <i>Pseudopimelodus zungaro</i> (H.)		—	—		
5. <i>Perugia xanthus</i> (E.)			—		
6. <i>Cetopsorhamdia nasus</i> E. and F.			—		
7. <i>Cetopsorhamdia boquilla</i> E.					— 5,700
8. <i>Rhamdia wagneri</i> (G.)		—			
9. <i>Rhamdia sebæ</i> (C. and V.)		—			
10. <i>Nannorhamdia nemacheir</i> E. and F.			—	—	
11. <i>Pimelodella chagresi</i> (St.)		—	—		
12. <i>Pimelodus grosskopfi</i> St.		—	—	—	
13. <i>Pimelodus clarias</i> (Bl.)		—	—		
14. <i>Pseudoplatystoma fasciatum</i> (L.)		—	—		
15. <i>Sorubim lima</i> (Bl. and Sch.)		—	—		
16. <i>Doras crocodili</i> H.		—			
17. <i>Trachycorystes insignis</i> (St.)		—			
18. <i>Ageneiosus caucanus</i> St.		—			
19. <i>Ageneiosus dentatus</i> K.		—			
20. <i>Astroblepus homodon</i> (R.)					— 7,260
21. <i>Astroblepus guentheri</i> (B.)					—?
22. <i>Astroblepus chapmani</i> (E.)					— 5,700
23. <i>Astroblepus unifasciatus</i> E.					— 4,000
24. <i>Astroblepus unifasciatus</i> E.					— 6,000
25. <i>Astroblepus frenatus</i> E.					— 6,500
26. <i>Astroblepus grimaldii</i> H.					—10,700
27. <i>Astroblepus micrescens</i> E.					— 8,500
28. <i>Astroblepus chotæ</i> (R.)					—10,000
29. <i>Astroblepus longifilis</i> (St.)					— 6,000
30. <i>Hemicetopsis othonops</i> E.		?	—	—	
31. <i>Pygidium stellatum</i> E.			—		— 4,000
32. <i>Pygidium chapmani</i> E.					— 5,700

²The numbers in this column indicate the highest recorded altitude in feet.

Table of Distribution of the Fishes of the Magdalena Basin—Continued

	Marine fishes entering mouth of river	Lower Magdalena	Upper Magdalena	Cauca	Torrents and high altitude ²
33. <i>Pygidium caliense</i> E.....				—	
34. <i>Pygidium stramineum</i> E.....					— 7,400
35. <i>Pygidium bogotense</i> E.....					— 9,000
36. <i>Pygidium nigromaculatum</i> (B.).....					— 4,000
37. <i>Pygidium banneai</i> E.....		?	—		
38. <i>Pygidium retropinna</i> R.....					— 5,000
39. <i>Pygidium venulosum</i> St.....					—10,000
40. <i>Pygidium latistriatum</i> E.....					— 4,200
41. <i>Pygidium striatum</i> M. and H.....					— 7,300
42. <i>Eremophilus mutisii</i> H.....					— 9,000
43. ? <i>Corydoras melanotænia</i> R.....		?	—		
44. <i>Hoplosternum magdalenæ</i> E.....		—			
45. <i>Plecostomus tenuicauda</i> St.....		—	—		
46. <i>Pterygoplichthys undecimalis</i> G.....		—			
47. <i>Lasiancistrus caucanus</i> E.....			—	—	
48. <i>Pseudancistrus carnegiei</i> E.....					— 3,320
49. <i>Pseudancistrus setosus</i> (B.).....					— 7,400?
50. <i>Panaque gibbosus</i> (St.).....		—	—		
51. <i>Cochliodon hondæ</i> R.....		?	—		
52. <i>Chætostomus fischeri</i> St.....		?	—	—	
53. <i>Chætostomus thomsoni</i> R.....					— 7,300
54. <i>Loricaria magdalenæ</i> St.....		—			
55. <i>Loricaria filamentosa</i> St.....		—			
56. <i>Loricaria f. seminuda</i> E. and V.....			—		
57. <i>Loricaria gymnogaster</i> E. and V.....			—		
58. <i>Loricaria fimbriata</i> E. and V.....			—		
59. <i>Loricaria variegata</i> St.....		—	—		
60. <i>Sturisoma panamense</i> E. and E.....		—			
61. <i>Sturisoma aurea</i> St.....		—			
62. <i>Sturisoma leightoni</i> (R.).....			—	—	
63. <i>Farlowella gracilis</i> B.....				—	
64. <i>Curimatus magdalenæ</i> St.....		—			
65. <i>Curimatus mivartii</i> St.....		—	—		
66. <i>Parodon suborbitalis</i> C. and V.....		—	—		
67. <i>Parodon caliensis</i> B.....				—	

Table of Distribution of the Fishes of the Magdalena Basin—Continued

	Marine fishes entering mouth of river	Lower Magdalena	Upper Magdalena	Cauca	Torrents and high altitude
68. <i>Prochilodus longirostris</i> St.....	—	—	—	—	
69. <i>Prochilodus magdalenæ</i> St.....	—	—	—	—	
70. <i>Prochilodus steindachneri</i> E.....	—	—	—	—	
71. <i>Leporinodus sexdentatus</i> E.....	—	—	—	—	
72. <i>Abramites eques</i> St.....	—	—	—	—	
73. <i>Leporinus striatus</i> K.....	—	—	—	—	
74. <i>Leporinus muyscorum</i> St.....	—	—	—	—	
75. <i>Characidium fasciatum</i> R.....	?	—	—	—	
76. <i>Characidium caucanum</i> E.....	—	—	—	—	
77. <i>Characidium phoxcephalum</i>	—	—	—	—	
78. <i>Pyrrhulina semifasciata</i> R.....	?	—	—	—	
79. <i>Grundulus bogotensis</i> H.....	—	—	—	—	— 9,000
80. <i>Odontostilbe hastata</i> E.....	—	—	—	—	
81. <i>Cheirodon insignis</i> St.....	—	—	—	—	
82. <i>Brycon rubricauda</i> St.....	—	—	—	—	
83. <i>Brycon henni</i> E.....	—	—	—	—	
84. <i>Brycon moorei</i> St.....	—	—	—	—	
85. <i>Othonophanes labiatus</i> (St.).....	—	—	—	—	
86. <i>Hyphessobrycon inconstans</i> (E. and O.).....	—	—	—	—	
87. <i>Hyphessobrycon poecilioides</i> E.....	—	—	—	—	
88. <i>Hyphessobrycon panamensis</i> D.....	—	—	—	—	
89. <i>Astyanax bimaculatus borealis</i> E....	—	—	—	—	
90. <i>Astyanax magdalenæ</i> E. and H....	—	—	—	—	
91. <i>Astyanax atratcensis</i> E.....	—	—	—	—	
92. <i>Astyanax caucanus</i> (St.).....	—	—	—	—	
93. <i>Astyanax filiferus</i> (E.).....	—	—	—	—	
94. <i>Astyanax microlepis</i> E.....	—	—	—	—	
95. <i>Astyanax fasciatus</i> (C.).....	—	—	—	—	
96. <i>Astyanax aurocaudatus</i> E.....	—	—	—	—	— 5,700
97. <i>Genycharax tarpon</i> E.....	—	—	—	—	— 3,600
98. <i>Creagrutus beni</i> E.....	—	—	—	—	— 7,258
99. <i>Creagrutus brevipinnis</i> E.....	—	—	—	—	
100. <i>Creagrutus magdalenæ</i> E.....	—	—	—	—	
101. <i>Creagrutus affinis</i> St.....	—	—	—	—	
102. <i>Creagrutus caucanus</i> E.....	—	—	—	—	

Table of Distribution of the Fishes of the Magdalena
Basin—Continued

	Marine fishes entering mouth of river	Lower Magdalena	Upper Magdalena	Cauca	Torrents and high altitude ²
103. <i>Microgenys minutus</i> E.....				—	
104. <i>Argopleura conventus</i> E.....		—			
105. <i>Argopleura diquensis</i> E.....		—			— 7,258
106. <i>Argopleura magdalenensis</i> E.....		—	—	—	
107. <i>Bryconamericus caucanus</i> E.....				—	— 5,700
108. <i>Hemibrycon tolimæ</i> (E.).....					— 7,000
109. <i>Hemibrycon colombianus</i> E.....					— 4,100
110. <i>Hemibrycon boquillæ</i> E.....					— 5,700
111. <i>Hemibrycon dentatus</i> E.....				—	
112. <i>Hemibrycon decurrens</i> E.....		—			
113. <i>Gephyrocharax caucanus</i> E.....				—	
114. <i>Gephyrocharax melanocheir</i> E.....		—	—		
115. <i>Chalcinus magdalenæ</i> St.....		—	—		
116. <i>Thoracocharax magdalenæ</i> E.....			—		
117. <i>Salminus affinis</i> St.....		—	—		
118. <i>Charax magdalenæ</i> St.....		—	—		
119. <i>Rœboides magdalenæ</i> E.....		—	—		
120. <i>Rœboides caucæ</i> E.....				—	
121. <i>Rœboides dayii</i> St.....		—			
122. <i>Acestrocephalus anomalus</i> (St.).....		—	—		
123. <i>Gilbertolus alatus</i> (St.).....		—			
124. <i>Ctenolucius in sculptus</i> St.....		—	—		
125. <i>Hoplias malabaricus</i> (Bl.).....		—	—		
126. <i>Sternopygus macrurus</i> (Bl. and Sch.)		—	—	—	
127. <i>Eigenmannia virescens</i> (V.).....		—	—		
128. <i>Hypopomus brevirostris</i> St.....		—			
129. <i>Sternarchus rostratus</i> M. and H.....		—	—		
130. <i>Sternarchus mariæ</i> E. and F.....			—		
131. <i>Synbranchus marmoratus</i> Bl.....		—			
132. <i>Anguilla chrysypa</i> R.....		—			
133. <i>Tarpon atlanticus</i> (C. and V.).....		—			
134. <i>Gambusia caliensis</i> E. and H.....				—	
135. <i>Mollienisia sphenops</i> (C. and V.).....		—			
136. <i>Mollienisia caucana</i> (St.).....		—			
137. <i>Rivulus elegans</i> St.....				—	
138. <i>Rivulus magdalenæ</i> E. and H.....			—		— 4,250

Table of Distribution of the Fishes of the Magdalena Basin—Continued

	Marine fishes entering mouth of river	Lower Magdalena	Upper Magdalena	Cauca	Torrents and high altitudes
139. <i>Rivulus brevis</i> R.?					
140. <i>Mugil brasiliensis</i> A.	—				
141. <i>Mugil incilis</i> G.	—				
142. <i>Mugil liza</i> C. and V.	—				
143. <i>Agonostomus macracanthus</i> R.		—			
144. <i>Centropomus undecimalis</i> (Bl.)	—				
145. <i>Centropomus ensiferus</i> P.	—				
146. <i>Centropomus pedimacula</i> P.	—				
147. <i>Plagioscion surinamensis</i> (Bl.)		—			
<i>Hæmulon plumieri</i> L.	—				
<i>Bairdiella armata</i> Gill.	—				
<i>Gerres rhombeus</i> C. and V.	—				
<i>Gerres plumieri</i> C. and V.	—				
<i>Trichiurus lepturus</i> L.	—				
<i>Spheroides testudineus</i> (L.)	—				
148. <i>Geophagus steindachneri</i> E. and H.		—	—		— 4,250
149. <i>Aequidens latifrons</i> (St.)		—			
150. <i>Cichlasoma kraussii</i> (St.)		—			
151. <i>Cichlasoma umbriferum</i> M. and H.		—	—		
152. <i>Dormitator maculatus</i> Bl.		—			
153. <i>Eleotris pisonis</i> (Gmelin)		—			
154. <i>Sicydium salvini</i> Grant		—			
155. <i>Awaous decemlineatus</i> E.		—			
Totals.	78	54	29	35
Per cent of the total, about.	50	35	18.7	22.6

The categories into which I have divided the fauna of the Magdalena basin are not of equal value nor are the contents of the different regions equally well known. Certainly none of them are exhaustively known. The fishes in the first column are really marine fishes that wander into or live more or less permanently in the estuaries. The "Lower Magdalena" includes the Magdalena from its mouth to La Dorado and the Cauca to Caceres.

In the "Upper Magdalena" are included all that are known from south of La Dorado in the main stream and its larger tributaries to (including) Ibagué. It should take in the contents to Neiva. In reality all we know has come from between Honda and Girardot with the tributaries in this short stretch. Many or all of these will also be found in the lower Magdalena. There is always a reasonable expectation that the fishes in any stretch will be found lower down and there is no sharp break between Honda and the river below La Dorado.

Similarly the column for the Cauca should include everything from the rapids below Cartago to the head of navigation, but nothing is known from Cali upward.

Finally, the last column includes a variety of streams from the highest altitudes down to the mouths of the streams where torrential conditions give place to large stream conditions. I give the highest known altitude in feet where it was obtainable. In some cases the altitude may be the sole factor determining the presence or absence of a species. In many others torrential conditions that frequently go with altitude determine the distribution.

Of the species found in the upper Cauca, 11 are also found in the upper Magdalena and 5 in the lower Magdalena.

Of the 54 species in the upper Magdalena, 32 are also found in the lower Magdalena.

Conclusion. The above analysis demonstrates that the fish fauna of the Magdalena basin was derived in small part from the ocean and in larger part from Central America. It demonstrates beyond a peradventure that most of it had an origin in common with that of the Orinoco basin to the east of it, and that the fauna of the Magdalena was segregated from the general fauna of the Orinoco by the formation of the Cordillera of Bogota between the two, at a time antedating the development of most of the present species. It also demonstrates that if the above conclusions are valid some species found on both sides antedate the formation of the Cordillera of Bogota; that the stripes of the large catfish, the *Bagre tigre* have persisted during the entire time since the Cordillera of Bogota began to be an effective barrier against the intermigration of the fishes of the two sides.





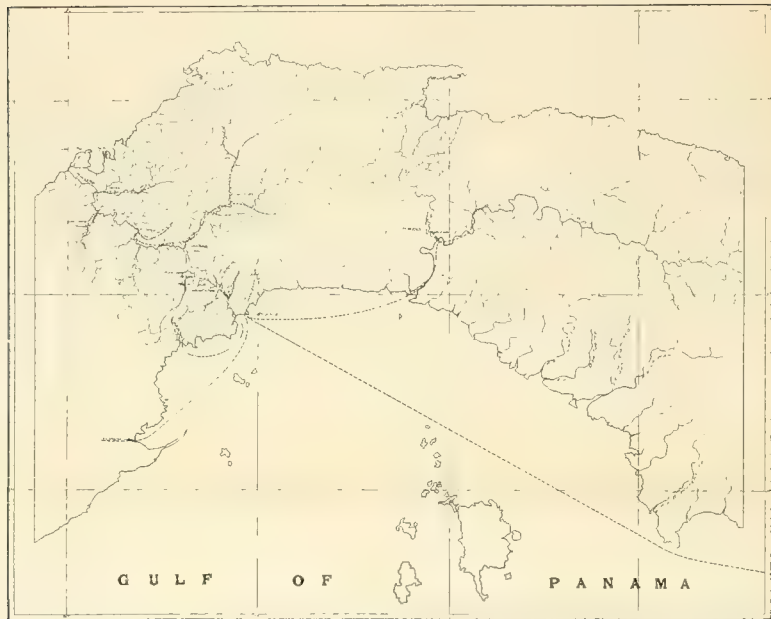


PLATE I

Panama from the 80th meridian, to the mouth of the Tuira showing lines of travel of Meek and Hildebrand while collecting fishes. For the continuation eastward and southward see Plate II. From *Report of the Isthmian Canal Commission 1899-1901*.



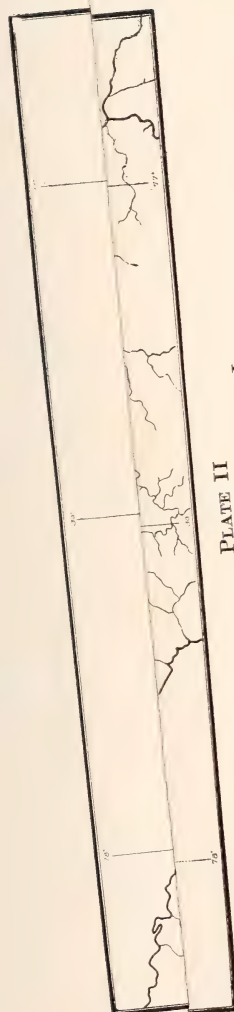


PLATE II
For explanation see Plate I.

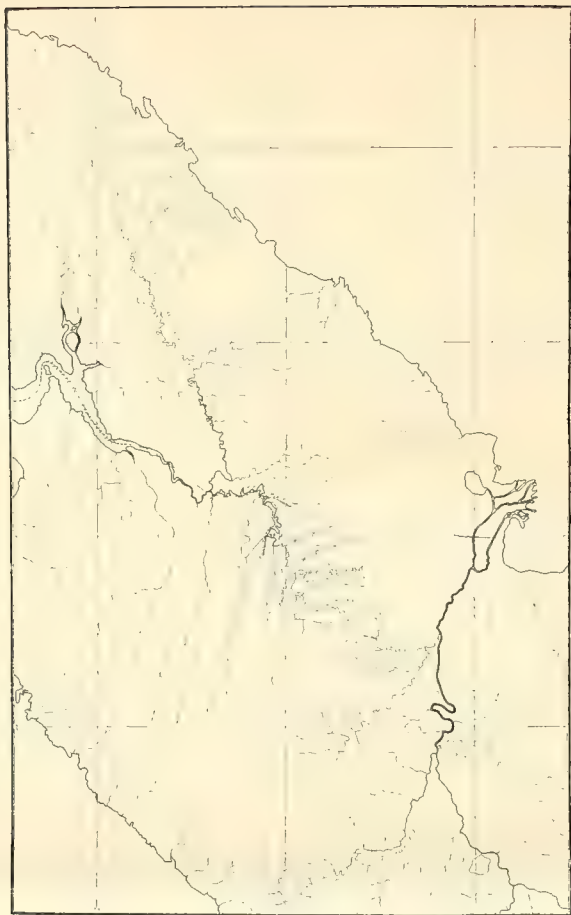


PLATE II
For explanation see Plate I



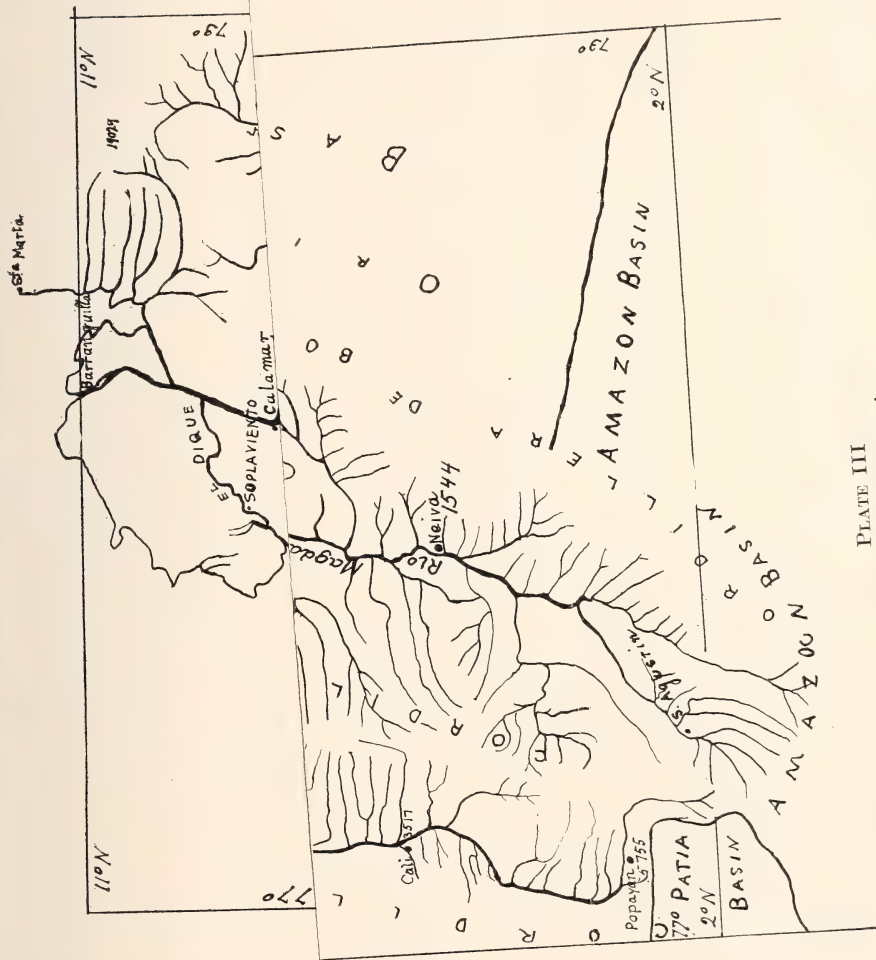


PLATE III
The Magdalena Basin.





PLATE IV.
Section across the Magdalena Valley and Andes at the latitude of Bogotá. In part after Holton.

INDIANA UNIVERSITY STUDIES

Contributions to Knowledge made by Instruc-
tors and Advanced Students of
the University

VOLUME VIII

Nos. 48-51. January, 1921, to December, 1921

BLOOMINGTON, INDIANA

Published by the University

The UNIVERSITY STUDIES constitute a series of University publications, in which are published some of the contributions to knowledge made by instructors and advanced students of the University. At present four numbers are issued a year.

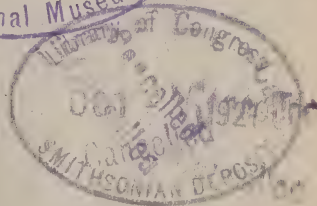
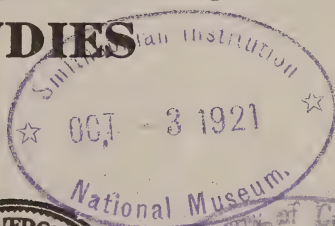
For Sale by the University Bookstore, Bloomington, Ind.

Table of Contents

VOLUME VIII

48. INDEX VERBORUM DE COVARRUVIAS OROZCO: TESORO DE LA LENGUA CASTELLANA, o ESPANOLA. Madrid, 1674-1673. By JOHN M. HILL, Ph.D., Associate Professor of Spanish, Indiana University.
49. JUVENILE DELINQUENCY and ADULT CRIME. Certain associations of juvenile delinquency and adult crime in Gary, Ind., with special reference to the immigrant population. By EDNA HATFIELD EDMONDSON, Ph.D., Assistant Professor in the Extension Division, Indiana University.
50. WILLIAM DE MORGAN AND THE GREATER EARLY VICTORIANS. By WILL T. HALE, Ph.D., Assistant Professor of English, Indiana University.
51. REPORT OF THE DEAN OF THE GRADUATE SCHOOL, INDIANA UNIVERSITY.

INDIANA UNIVERSITY STUDIES



Study No. 48

INDEX VERBORUM

DE

COVARRUVIAS OROZCO: TESORO DE LA LENGVA CASTELLANA,
O ESPAÑOLA. MADRID, 1674-1673.

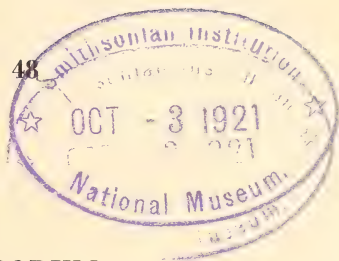
LO PUBLICA

JOHN M. HILL

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

Study No. 48



INDEX VERBORUM

DE

COVARRUVIAS OROZCO: TESORO DE LA LENGVA CASTELLANA,
O ESPAÑOLA. MADRID, 1674-1673.

LO PUBLICA

JOHN M. HILL

Prólogo

En 1611 publicó en Madrid El Licenciado Don Sebastian de Covarruvias Orozco la primera edición de su TESORO DE LA LENGVA CASTELLANA, O ESPAÑOLA. Unos sesenta y tres años después salió a luz la segunda edición de este *Tesoro*, AÑADIDO POR EL PADRE BENITO REMIGIO NOYDENS. Esta última edición fué publicada en dos partes, la primera con fecha 1674, la segunda con fecha 1673, e iba acompañada de un tratado DEL ORIGEN Y PRINCIPIO DE LA LENGVA CASTELLANA, O ROMANCE QUE OY SE VSA EN ESPAÑA, COMPUESTO POR EL DOCTOR BERNARDO ALDRETE.

Al publicarse la primera edición del Diccionario de la Lengua Española por la Real Academia Española, el llamado *de Autoridades*, (6 tomos, folio, Madrid, 1726-1739), se reconoció el grande valor de la obra de Covarruvias en los términos siguientes:

Es evidente que à este Autor se le debe la glória de haver dado principio à obra tan grande, que ha servido à la Académia de elara luz en la confusa obscuridad de empresa tan insigne;.....pero la Real Académia, venerando el noble pensamiento de Covarrubias, y siguiendole en las voces en que halló proporción y verisimilitud, ha formado el Diccionario, sujetandose à aquellos principios.....(PRÓLOGO, Pag. 1).

Desde entonces acá, ambas ediciones del *Tesoro* han escaseado muchísimo y a la vez el interés por el estudio de la lengua y literatura españolas del siglo xvii ha tomado un aumento muy considerable. Debido a ésta y a otras varias causas los hispanistas de todos los países han venido reconociendo más y más cada día el mérito de la obra de nuestro autor, de tal manera que la consulta de ésta ha llegado a ser poco menos que indispensable para todo aquel que quiera dedicarse al estudio de la lengua española del siglo xvii.

Sin embargo, dicha consulta nó es siempre fácil. El orden de las voces del diccionario, si bien principalmente alfabético, se halla determinado a menudo por consideraciones meramente etimológicas o fonológicas. El autor declara frecuentemente (*e. g.*, *s. v.* ÇAFIR, CELOSO, CIELO, FENIX, *et al.*) que no escribe *para Romancistas*. Y anuncia que su propósito es el de investigar las etimologías (*s. v.* BRVXA.....“no me detendre en estender

esta materia, sino acudir a mi instituto, que es investigar las etimologías de los vocablos"véase también CANDELA, CARIDAD, CIELO).

El *Indice* que sigue aspira a servir de doble propósito: (1) facilitar a los que se sirven del diccionario la consulta más pronta y ventajosa; (2) proporcionar a los estudiantes del español del siglo XVII una lista de todas las palabras *definidas* en el único diccionario de mérito considerable publicado en España antes del 1726.

A este fin se ha elegido la edición de 1674-1673, ya que contiene un vocabulario algo más extensivo que la de 1611. Con excepción de las eliminaciones abajo apuntadas, todos los vocablos definidos en dicha edición se incluyen en este *Indice*:

1. Los adverbios terminados en *-mente*, a no ser que encabezen un artículo, se excluyen.
2. Los participios pasivos, a no ser que encabezen un artículo o tengan sentido especial, se excluyen.
3. Los derivados sin definición se omiten.
4. Los nombres propios, a no ser que encabezen un artículo, se excluyen por regla general, bien que unos cuantos, por ofrecer algún interés particular, se admiten.

Las faltas de ortografía son numerosas, pero en este *Indice* no se ha hecho ninguna enmienda.

Los cambios de ortografía son igualmente numerosos, y al consultar el diccionario se deben tener en cuenta las siguientes substituciones ortográficas:

b y *v*, inicial e intervocálica, se usan una por otra.

ç por *z*

ç por *s*, sobre todo delante de *e*, *i*.

ch por *c* o *qu*, común en voces de origen griego.

em por *en*

es por *ex*

f por *h*

g por *j*, delante de *e*, *i*

gue por *hue*

h inicial, no se escribe generalmente.

i por *j*

J (*mayúscula*), no se imprime, pero está substituida por *I*,

X, *j*

m por *n*, delante de *b*.

o por *u*

r por *l*

rr por *r*

ss por *s*

ti por *ci*

u por *o*

v por *b*

y, intervocálica, sigue, por regla general, a *i* intervocálica en orden alfabético.

Y (*mayúscula*) está representada por *I*.

z por *c*, sobre todo delante de *e*, *i*.

Muchos adjetivos se imprimen sólo en la forma femenina (a veces seguidos de la voz *COSA*).

Muchos nombres se imprimen solamente en plural.

* * * * *

ORDEN Y DISPOSICIÓN DE ESTE INDEX

Las voces que encabezan un artículo en el diccionario se imprimen en *VERSALITAS*.

Las voces derivadas, las afines, y las que se hallan sólo en el cuerpo de un artículo se imprimen en letra romana.

Las voces entre los signos () designan otros artículos en donde se pueden encontrar explicaciones adicionales.

Los numerales puestos después de una voz indican que dicha voz encabeza igual número de artículos distintos, ya sea en orden alfabético, ya en el apuntado.

Se ha guardado el orden rigurosamente alfabético en este *Index*, hasta el punto de colocar los nombres en plural en un lugar distinto del que exige el singular.

Abreviaturas

err. = erratum, error

s. = sequitur, sigue a

v. = vide, véase

A

A

A. B. C.

ABABOL (AMAPOLA)

ABAD

ABADEIO

abadejo *v.* ABADEIO; CANTARIDES

ABADESA

ABAHAR (BAHO)

abalancar *v.* ABALANZARSE

ABALANZARSE

ABARCA

ABARCAR (SOBACO)

abarragano *v.* BARRAGAN

ABARRAGANARSE (BARRAGAN)

ABARRANCARSE (BARRANCO)

abastado *v.* BASTO

ABASTAR

ABASTO

ABATIDA

abatir *v.* BATIR

ABAXAR

ABDALA 1, 2

ABDALACIZ

ABEIA

ABEION

ABEIORVCO

ABENVZ

ABERTVRA

ABESTRVZ

ABETO

abezado *v.* BEZO

ABEZAR (BEZO)

abia *v.* ABIAS

ABIAS

ABIATHAR

ABIERTO 1, *s.* ABETOABIERTO 2, *s.* ABRIR

ABIGAIL

ABIGARRADO

ABIGEO

abigiamiento *v.* ABIGARRADO

ABIL

ABILA

abilidad *v.* ABILabilitar *v.* ABIL

ABILTAR

ABIMELECH

ABINTESTATO

ABIRON

ABISADO

ABISAG

ABISMALES

ABISMO

ABISPA

ABISPADO *s.* AVISPA; *v.* ABISPAabitable *v.* ABITARabitacion *v.* ABITARabitaculo *v.* ABITARabitador *v.* ABITAR

ABITAR

ABIVAR

ABLANDAR (BLANDA)

ABLENTAR

ABOCAR

ABOFETEAR (BOFETADA)

ABOGACIA

ABOGADO

ABOLENGO

abolorio *v.* ABOLENGO

ABOLLAR (BOLLO)

ABOMINABLE

ABOMINACION

ABOMINAR

abonar *v.* BVENO

ABONDO (ABVNDAR)

ABORDAR (BORDAR)

ABORIGINES

ABORRECER

aborrecible *v.* ABORRECERabortivo *v.* ABORTO

ABORTO

aborton *v.* ABORTO

ABOTONAR
 ABOTONARSE *s.* BOTON
 abraçar *v.* BRAÇO 4
 ABRANTES
 ABRASAR (BRASA)
 ABRAZADERAS
 ABRAZAR
 ABREGO
 ABREVAR
 ABREVIADOR (BREVE)
 ABREVIAR (BREVE)
 abreviatura *v.* ABREVIAR
 abridor *v.* ABRIR
 ABRIGAR
 abrigarse *v.* BREGA
 ABRIGO
 ABRIL
 ABRIR
 abrochar *v.* ABIERTO; BROCA
 ABROIO
 abroquelarse *v.* BROCA,
 BROQVEL
 ABROTANO
 absentio *v.* ASSENCIOS
 ABVBILLA
 ABVCASTA
 ABVELO
 abufado *v.* ABVHADO
 ABVHADO 1
 ABVHADO 2, *s.* BVHO
 abultado *v.* BVLTO
 ABVLTAR (BVLTO)
 abundancia *v.* ABVNDAR
 abundante *v.* ABVNDAR
 ABVNDAR
 ABVRAR
 aburrido *v.* ABORRECER
 ABVRRIR (ABORRECER)
 abusion *v.* ABVSO
 ABVSO (VSVAL)
 ABVTARDA
 ABYDO

ACA
 acabado *v.* ACABAR
 ACABAR (CABO)
 AÇACAN (ÇAQVE)
 AÇADA
 ACADEMIA
 academico *v.* ACADEMIA
 açadon *v.* AÇADA
 açadonado *v.* AÇADONERO
 AÇADONERO
 ACAECER
 acaecimiento *v.* ACAECER
 AÇAFATE
 AÇAFRAN
 AÇAFRANADO
 açafranal *v.* AÇAFRANADO
 AÇAGAYA
 ACANELAR (CANAL 2)
 açarandado *v.* ÇARANDA
 acarava *v.* CABIDA
 AÇARCON
 acardenalado *v.* CARDENA
 acariciador *v.* CARICIA
 ACARICIAR (CARICIA)
 ACARREAR
 acarreo *v.* ACARREAR
 acarreto *v.* ACARREAR
 ACASO
 acatamiento *v.* ACATAR
 ACATAR (CATAR)
 ACATARRARSE *s.* CATARRO
 acaudalar *v.* CAVDAL
 acaudillar *v.* CAVDILLO
 açavache *v.* AZAVACHE
 ACCESSION *s.* ACERTAR
 accidente *v.* ACCESSION
 ACCION
 ACECHANÇAS
 ACECHAR
 ACECHE
 ACEFALO
 ACELGA

ACEMITE
 acendrado *v.* CENDRA
 acensado, *v.* CENSO
 acensado *v.* ACENSVAR
 ACENSVAR
 ACENTO
 ACENTVAR
 ACEÑA
 acepilladura *v.* ACEPILLAR;
 CEPILLO
 ACEPILLAR (CEPILLO)
 aceptacion *v.* ACETAR
 acepto *v.* ACETAR
 ACEQVIA
 ACERCEN
 acertado *v.* ACERTAR
 ACERTAR
 ACETAR
 ACETRE 1
 ACETRE 2, *s.* CETRERIA
 ACEVADARSE (CEVADERO)
 ACEZAR
 acezo *v.* ACEZAR
 ACIAL
 ACIBAR
 ACICALAR
 ACICATES
 ACIDENTAL
 ACIDENTE
 ACIDIA
 acierto *v.* ACERTAR
 ACION 1, *s.* ACCIÒN
 ACION 2, *s.* ACIDIA
 ACIPRESTE
 aclamar *v.* CLAMOR
 ACLARAR (CLARO)
 acocoador *v.* COCEAR
 ACOCEAR
 ACODAR (CODERA)
 acodiciarse *v.* CODICIAR
 AÇOFAR
 açofeifo *v.* AÇVFEIFO

ACOGER (COGER)
 ACOGERSE
 acogida *v.* ACOGERSE
 acogimiento *v.* ACOGERSE
 ACOGOTAR
 AÇOGVE
 AÇOGVEIO
 açolar *v.* AÇVELA
 ACOLITO
 AÇOMAR
 ACOMETER
 ACOMODAR
 ACOMODARSE (COMODO)
 acompañamiento *v.* ACOMPAÑAR
 ACOMPAÑAR (COMPAÑON)
 acomplixionado *v.* COMPLEXION
 ACONCHAR
 aconchavarse *v.* CONCHAVANÇA
 acondicionado *v.* CONDICION
 ACONTAR
 ACONTECER
 acontecimiento *v.* ACONTECER
 ACOPADO (COPA)
 AÇOR (TORÇVELO)
 açorado *v.* AÇOR
 açorarse *v.* AÇOR
 ACORDAR (CVERDA)
 ACORRVCARSE
 ACORTAR
 acosado *v.* ACOSAR
 ACOSAR (COSO)
 acostamiento *v.* ACORTAR
 ACOSTAR
 acostumbrado *v.* ACOSTVMBRAR
 ACOSTVMBRAR
 acotar *v.* COTA 3; COTO 1
 AÇOTE (ÇVRRIGA)
 acoytar *v.* ACOGERSE
 acrecentamiento *v.* ACRECENTAR
 ACRECENTAR
 acreitar (se) *v.* CREDITO
 ACREEDOR

acriminar *v.* CRIMINAL

ACRIMONIA

acrivado *v.* ACRIVAR; CRIVA

ACRIVAR (CRIVA)

AÇVCAR

AÇVCENA

acuciar *v.* ACVCHILLAR

acuehilladizo *v.* ACVCHILLAR;

CVCHILLO

ACVCHILLAR

acuehillarse *v.* CVCHILLO

AÇVDA

ACVDIR

AÇVELA

ACVESTAS

açufaifa *v.* AÇVFEIFO

açuifeifa *v.* AÇVFEIFO

AÇVFEIFO

açufrador *v.* ALCREVITE;

ENXVGAR

açufrarse *v.* ALCREVITE

AÇVFRE (ALCREVITE)

ACVILLA

AÇVMBRE

ACVMVLAR

ACVÑAR (CVÑA)

AÇVQVEICA

acusacion *v.* ACVSAR

acusado *v.* ACVSAR

ACVSAR

AÇVTEA (AXARAFE)

acuytarse *v.* CVITA

acymite *v.* ACEMITE

achacar *v.* ACHAQVE; ASACAR

achacoso *v.* ACHAQVE

ACHAQVE

achaquiento *v.* ACHAQVE;

AXAQVIENTO; ENFERMO

ACHICAR

achinelado *v.* CHINELA

ACHOCAR

ADAGIO

ADAHALA

ADALID

adamado *v.* DAMA

adamar *v.* AMORES

ADAN

ADARGA

ADARGARSE

ADARME (DRAMA)

adarvarse *v.* ADARVE

ADARVE

ADEFESIO

ADELANTADO

adelantar *v.* ADELANTARSE

ADELANTARSE

ADELANTE

ADELFA

ADELGAZAR

ADEMAN

ADENTRO

ADEREÇAR

adereço *v.* ADEREÇAR

ADERENTE

ADESORAS

ADESTRAR (Diestra)

adeudado *v.* ADEVDARSE

ADEVDARSE

adicion *v.* AÑADIDVRA

ADIVAS

ADIVINAR

ADIVINO (ADIVINAR)

administracion *v.* ADMINISTRAR

administrador *v.* ADMINISTRAR

ADMINISTRAR

admirable *v.* ADMIRACION;

MIRAR

ADMIRACION

admirado *v.* ADMIRACION

admirar *v.* ADMIRACION

ADOBAR

ADOBE

adobio *v.* ADOBAR

ADOLECER (DOLERSE)

ADOPTAR
 adoptivo *v.* ADOPTAR
 ADORAR
 ADORMECER
 ADORMECERSE (DORMIR 2)
 adormecido *v.* ADORMECERSE
 ADORMIDERA
 ADORNADO
 ADORNAR
 adorno *v.* ADORNADO
 adozenado *v.* DOZE
 adquiridor *v.* ADQVIRIR
 ADQVIRIR
 ADREDE
 ADVANA
 aduanero *v.* ADVANA
 ADVAR
 ADVFRE
 adulacion *v.* ADVLADOR
 ADVLADOR
 aduladora *v.* ADVLADOR
 ADVLAR
 ADVLÇAR
 ADVLTERAR
 adulterino *v.* ADVLTERAR
 adulterio *v.* ADVLTERAR;
 ESTVPRO
 ADVENEDIZO
 ADVERSARIO
 ADVERSIDAD
 adverso *v.* ADVERSARIO
 advertencia *v.* ADVERTIR
 advertimiento *v.* ADVERTIR
 ADVERTIR
 afabilidad *v.* AFABLE
 AFABLE
 AFAN
 afanador *v.* AFAN
 AFEAR 1
 AFEAR 2, *s.* FEALDAD
 afectacion *v.* AFECTAR
 AFECTAR

AFECTO
 AFEITE
 AFEMINADO 1, 2
 aferrar *v.* HIERRO
 afeytar *v.* AFEITE
 aficion *v.* AFICIONAR
 AFICIONAR
 AFILAR (FIL)
 AFINAR (FINO)
 afincadamente *v.* AFINCAR
 AFINCAR
 AFIRMANTE
 AFIRMAR (FIRMA)
 afficcion *v.* AFLIGIR
 AFLIGIR
 AFLOXAR (FLOXO)
 AFORISMO
 AFORRAR
 afortos *v.* AFORRAR
 AFRECHOS
 AFRENTA
 afrentar *v.* FRENTE
 afrentosa cosa *v.* AFRENTA
 AFRICA
 AFRONTAR
 AFVCIAR
 afuera *v.* FVERA
 AFVFAR
 agachado *v.* GACHO
 AGACHARSE
 AGALLA 1, 2
 AGALLONES
 AGANIPE
 AGAPITO
 AGAR
 AGARICO
 AGARRAR (GARABATO)
 agarrochado *v.* GARROCHON
 AGASAIAR
 agasajar *v.* GASAJO
 AGATA
 AGATAS [= a gatas] AGACHARSE]

AGATOCLES
 agavillarse *v.* GAVILLA
 AGAZAPARSE *s.* AFVFAR (GAZA-
 PERA)
 AGENO
 AGENVZ
 agestado *v.* GESTO
 AGIION
 AGIL
 AGILIDAD *v.* AGIL
 AGINALDO
 agironado *v.* GIRONA
 AGIRONAR
 AGLAYADO
 aglayarse *v.* AGLAYADO
 AGLAYO (AGLAYADO)
 AGNOCASTO
 AGNVSDEI
 AGONALES
 AGONIA
 agonizando *v.* AGONIA
 AGORA
 AGORAR
 agostadero *v.* AGOSTO
 agostar *v.* AGOSTO
 agostizo *v.* AGOSTO
 AGOSTO
 AGOTAR (GOTA 1)
 AGRACIADO (GRACIOSO)
 agraciar *v.* AGRACIADO
 agradable *v.* AGRADO; GRACIOSO
 agradar *v.* AGRADO
 agradecer *v.* AGRADO
 agradecido *v.* GRACIOSO
 AGRADO
 AGRAMONTE
 agrandar *v.* GRANDE 2
 agraviado *v.* AGRAVIO; GRAVE
 AGRAVIO
 agraz *v.* AGRAVIO
 agricultor *v.* AGRICVLTURA
 AGREDA

AGRICVLTURA
 AGRIMONIA
 agro *v.* CIDRO
 agrodulce *v.* DVLCE
 AGVA (NIEVE; VNGVENTO)
 aguaça *v.* AGVAR
 aguaderas *v.* AGVAR
 aguado *v.* AGVAR
 aguador *v.* AGVAR
 aguaducho *v.* AGVAR
 AGVAIAQ
 AGVAITAR
 aguamanil *v.* AGVA
 aguamano *v.* AGVA; FVENTE
 aguamiel *v.* AGVA
 aguanieve *v.* AGVA
 aguanoso *v.* AGVAR
 AGVAPIE *s.* PIE 2 (AGVA; ESPRE-
 MIDVRAS)
 AGVAR
 AGVARDAR (GVARDAR)
 aguas *v.* ORINA
 aguatocho *v.* AGVAR
 aguaytador *v.* AGVAITAR
 aguaytamento *v.* AGVAITAR
 aguçadera *v.* AGVÇAR
 AGVÇANIEVE
 AGVÇAR
 agudeza *v.* AGVDO
 AGVDO
 AGVEDA
 AGVELO (ABVELO)
 AGVERO
 AGVGETA (CINTA)
 agugetero *v.* AGVGETA
 AGVIA
 AGVIJA (GVIJA)
 AGVILA
 AGVILA, PIEDRA DEL, *s.* PIEDRA
 BEZAR
 AGVINALDO
 AGVILEÑO

AGVISADO
 AGVISADOS *s.* GVISADO
 aguja de pastor *v.* CIGOÑAL
 agujero *v.* AGVIA
 agujon *v.* AGHON
 aguzanieve *v.* GITANO
 AGVZAR
 AHAXAR
 AHECHADVRAS
 AHECHAR
 AHIJADO
 AHILARSE (FILANDRIAS)
 ahincadamente *v.* AHINCO
 ahincar *v.* AHINCO
 AHINCO 1
 AHINCO 2, *s.* HINCAR
 AHINOJARSE *s.* HINOJOS
 ahirmar *v.* FIRMA
 ahitarse *v.* HITO
 AHITO
 AHOGAR
 AHORCAR
 ahormar *v.* HORMA
 ahorrado *v.* HORRO
 AHORRAR 1, 2
 ahorrarse *v.* HORRO
 ahorro *v.* HORRO
 AHOYAR
 AHVCHAR
 ahumada *v.* HVMO
 AHVMAR (HVMO)
 ai *v.* AY
 AIO
 AIOFRIN
 AIONIOLI
 aislarse *v.* ISLA
 ajo *v.* AIO; CORNVDO
 ajustar *v.* IVSTO 2
 ajusticiar *v.* IVSTICIA;
 IVSTICIERO
 AL 1, 2
 ALA

alabança *v.* ALABAR
 ALABAR
 ALABARDA (PARTESANA)
 alabardero *v.* ALABARDA
 alabastrino *v.* ALABASTRO
 ALABASTRO
 ALACENA
 ALACRAN (ESCORPION)
 ALADARES 1
 ALADARES 2, *s.* ALAZOR
 ALAGON
 ALAHEXOS
 ALAMAR
 ALAMARTEGA *s.* ALMARTAGA
 alambicarse *v.* ALAMBIQVE
 ALAMBIQVE
 ALAMBRE
 alameda *v.* ALAMO
 ALAMIN
 ALAMO
 ALAMVD
 ALANÇADA 1
 ALANÇADA 2, *s.* LANÇADA
 ALANÇAR
 alancear *v.* LANÇADA
 ALANCEARSE *s.* ALANÇADA 2
 ALANIA
 ALANO
 ALARABES
 alaraves *v.* GINETE
 ALARCON
 ALARCOS
 ALARDE
 ALARGAR
 ALARGEZ
 ALARIDO
 ALARIFE
 ALATON (LATON)
 ALAVA
 ALAXV
 alaxur *v.* ALAXV
 ALAZAN *s.* ALACRAN

ALAZOR 1, *s.* ALACENA
 ALAZOR 2
 ALBA 1, 2
 ALBACEA (CABEÇA)
 ALBACETE
 ALBACORA (BREVA)
 ALBAHACA
 albahega *v.* ALBAHACA
 ALBAICIN
 ALBAIDA
 ALBALA (ALVALA)
 ALBANEGA
 ALBAÑAR
 ALBAÑIR
 ALBAQVIA
 ALBARCOQVE
 ALBARDA
 albardero *v.* ALBARDA
 albardilla *v.* ALBARDA
 albardon *v.* ALBARDA
 ALBARRACIN
 ALBARRADA
 ALBARRAN 1, 2
 ALBARRANA
 ALBATOZA
 ALBAYALDE (ALVAYALDE)
 ALBEITAR
 albeiteria *v.* ALBEITAR
 ALBERCA (ALBERGVE)
 albergar *v.* ALBERGVE
 albergero *v.* ALBERGVE
 ALBERGVE
 albergueria *v.* ALBERGVE
 ALBIGENSES
 ALBIHARES
 ALBOGE
 ALBOGERO
 ALBOHERA
 ALBONDIGA
 ALBOR (ALVA)
 alborada *v.* ALBOR
 ALBORBOLAS

alborear *v.* ALBOR
 ALBORNIA
 ALBORNOZ
 alboroçada *v.* ALBOROÇO
 alboroçarse *v.* ALBOROÇO
 ALBOROÇO
 ALBOROQVE
 alborotado *v.* ALBOROTO
 alborotador *v.* ALBOROTO
 ALBOROTO
 ALBRICIAS 1, 2
 ALBVDECA (BADEA)
 ALBVFERA
 ALBVMIER
 ALBVQVERQVE
 ALBVR
 albura *v.* CORAÇON
 ALCAÇAR
 ALCAÇAVA
 ALCACEL
 alçacuello *v.* ALÇAR 2
 alçada *v.* ALÇAR 2
 ALCADVZ 1
 ALCADVZ 2, *s.* ARCADVZ
 ALCAHVETA (EMPLVMAR)
 ALCAHVETE
 alcahueteria *v.* ALCAHVETA
 ALCALA
 ALCALA DE HENARES
 alcaldada *v.* ALCALDE
 ALCALDE
 alcalde del rastro *v.* ARRASTRAR
 ALCANA
 alcançado *v.* GASTAR
 ALCANÇAR
 alcance *v.* ALCANÇAR
 ALCANCIA (BYCHE)
 alcanciago *v.* ALCANCIA
 ALCANDARA (CETRERIA;
 FALCON 1)
 ALCANFOR (CANFOR)
 ALCANIZ

ALCANTARA
 ALCAPARRA
 alçaprima *v.* ALCAR 2
 ALÇAR 1, 2
 ALCARAVAN
 ALCARAVEA
 ALCARAZ 1, 2
 ALCARCHOFA
 alcarchofado *v.* ALCARCHOFA
 ALCARRAZA
 ALCARRIA
 alçarse *v.* ALÇAR 2
 ALCARTAZ
 ALCATARA (ALQVITARA)
 ALCATIFA
 ALCAYDETE
 ALCAYDON
 ALCAYCERIA
 ALCAYDA *s.* ALFORIA
 ALCAYDE
 ALCAYTA
 ALCE
 ALCIDES
 ALCION
 ALCOBAZA
 ALCOCCEL
 ALCOCODEN
 ALCOFA
 ALCOHELA
 ALCOHOL
 ALCOLEA
 ALCOMENIAS (COMINO)
 ALCONCHEL
 ALCORAN
 ALCORÇA
 ALCORCON
 ALCORNOQVE
 alcorque *v.* CORCHO
 ALCOTAN
 ALCOVA
 ALCREVITE (AÇVFRE)
 ALCVDIA

ALCVNIA
 ALCVZA
 ALCVZCVZV
 alchermes *v.* GRANA
 alchimista *v.* FABVLA
 ALDAVA
 aldavada *v.* ALDAVA
 aldavilla *v.* ALDAVA
 aldavon *v.* / IDAVA
 ALDEA
 aldeano *v.* ALDEA
 aldeguela *v.* BVRGO
 aldeorrio *v.* ALDEA
 ALDERETE
 ALDIZA
 ALDONÇA
 alear *v.* ALA
 alebrarse *v.* LIEBRE
 ALECHE
 ALEDANO
 ALEGAR
 ALEGORIA
 alegorico *v.* ALEGORIZAR
 ALEGORIZAR
 ALEGRIA
 ALEGRON
 ALELI
 alelis *v.* ALHELI
 ALELVYA
 ALEMANIA
 ALENTAR 1, 2 (ALIENTO)
 ALERZO
 ALESNA
 ALEVE
 ALEVO
 alevosia *v.* ALEVE
 alevoso *v.* ALEVE
 ALEXANDRO
 ALEXAR (LEXOS)
 ALEXO
 ALFABEGA (ALBAHACA)
 ALFAGEME

ALFAHAR
 alfaharero *v.* ALFAHAR
 ALFALFA (MIELGA)
 ALFAMAR
 ALFANEQVE
 ALFANGE
 ALFAQVEQVE
 ALFAQVES
 ALFARDA
 ALFARGE
 ALFARO
 alfaxeme *v.* ALFAGEME
 ALFAXOR
 alfaxur *v.* ALAXV
 ALFAYATE
 ALFENIQVE
 alfeñique *v.* ALFENIQVE
 ALFERECIA
 ALFEREZ
 ALFILEL
 ALFOCIGO
 ALFOLI
 ALFOMBRA
 ALFONSINA
 ALFONSO 1, 2
 ALFORIA
 alforja *v.* ALFORIA; CORCOBA
 ALGALIA
 algamarina *v.* CHINCHE
 ALGAMIA *s.* ALJAMA
 ALGARA
 ALGARADA (ALGAZARA)
 ALGARAVIA
 ALGARBE
 ALGARES
 ALGARROBA
 algarve *v.* ALGARBE
 ALGAVA
 ALGAZARA
 ALGEBRA
 algebrista *v.* ALGEBRA
 ALGER

algeza *v.* ALGER
 ALGEZIRA
 ALGIBE
 ALGO (FIDALGO)
 ALGODON
 ALGORFA
 ALGVAQVIDA (ALCAHVETA;
 ALCREVITE)
 ALGVAZIL
 ALGVNO
 alhabega *v.* ALBAHACA
 ALHACENA (ALANIA)
 ALHAIA
 ALHAMA
 ALHAMAR
 ALHAMBRA
 ALHAMEL
 ALHANDAQVE
 ALHANIA
 ALHARACA
 alharaquiento *v.* ALHARACA
 alheilil *v.* ALHELI
 ALHELGA
 ALHELI
 ALHENA
 alhenarse *v.* ALHENA
 ALHEÑA
 ALHERCE (*cf.* ALERZO)
 alhocigo *v.* ALFOCIGO
 ALHOLI
 ALHOLVAS
 ALHOMBRA
 ALHONDIGA
 ALHORZA
 ALHOZIGO
 ALHVZEMA
 ALIADOS
 ALIAFERIA
 aliança *v.* ALIADOS
 ALICANTE
 ALICATES
 ALICERES

ALICOTA
 ALIENTO
 ALIFAFE
 aliger *v.* GVARNECER
 aligerar *v.* LIGERO
 ALIJARES 1, 2
 ALIMAÑA (ANIMAL)
 ALIMARA
 ALIMENTO
 ALIMPIAR
 ALINDAR (FINO)
 ALIÑAR
 aliño *v.* ALIÑAR
 aliñoso *v.* ALIÑAR
 ALIONIOLI
 ALISAR
 ALISTAR
 alistarse *v.* LISTA
 ALIVBA
 ALIVBAI ROTA
 aliviar *v.* ALIVIO
 ALIVIO
 ALIZAR (ALICERES)
 ALIZAZE
 ALJAMA
 aljamia *v.* ALGAMIA
 ALJAVA
 aljofarado *v.* A JOFAR
 ALJOFAR
 aljonjoli (alionioli) *v.* ALEGRIA
 ALMA 1
 ALMA 2, *s.* ALMAGVER
 ALMAÇAN
 ALMACIGA
 ALMADEN 1
 ALMADEN 2, *s.* ALMAZEN
 ALMADENA *s.* ALMADEN 2
 almadrahe *v.* ALMANAQVE
 ALMADRAQVE
 ALMADRAVA (ATVN)
 ALMAGRE
 ALMAGESTO

ALMAGRO
 ALMAIAL
 ALMAGVER
 ALMAIZAR
 ALMALAFA 1, 2
 ALMANAQVE
 ALMANÇOR
 ALMARCHA
 ALMARIALES
 ALMARIO
 ALMARRAIA
 almarraja *v.* ALMARRAIA
 ALMARTAGA
 almartega *v.* A AMARTEGA
 ALMAZAN
 ALMAZEN
 almaziga *v.* BARNIZ
 ALMEA
 ALMEIA
 ALMEIDA
 ALMENA
 almenar *v.* ALMENARA
 ALMENARA
 ALMENDRA
 almendrada *v.* ALMENDRA
 almendro *v.* ALMENDRA
 almendruco *v.* ALLOZA; ALMENDRA
 ALMERIA
 ALMETE
 ALMETOLI
 ALMEZ (TORRE DE LONDONES)
 ALMIAR
 ALMIDON
 ALMILLA
 ALMIRANTE (MARQUESOTA)
 ALMIREZ
 ALMIRON
 ALMIVAR
 ALMIXAR
 ALMIZCLE
 almizcleña *v.* MVSÇO
 almizcleño *v.* MOSCATEL

ALMIZCLERA
 ALMOCADEN
 ALMOCREVE
 ALMODOVAR
 ALMODROTE (SALMOREJO)
 ALMOFALA
 ALMOFAR
 ALMOFIA (AXVFAYNA)
 ALMOFREX
 ALMOGAVARES
 ALMOGERA
 ALMOHACEN
 ALMOHADA
 almohadilla *v.* ALMOHADA
 ALMOHAZA
 ALMOIAVANA
 ALMONAZI
 ALMONEDA
 almorabide *v.* MORABITO
 ALMORADVX
 ALMORAVIDES
 ALMORÇAR
 ALMOROX
 ALMORRANA
 almotacen *v.* OBISPO
 ALMOTAZEN
 ALMOXARIFE
 ALMVD (FANEGA)
 almudada *v.* ALMVD; FANEGA
 almudi *v.* ALMVD
 ALMVEDANO
 ALMVERÇO 1
 ALMVERÇO 2, *s.* ALMVEDANO
 ALMVÑECAR
 alna *v.* ANA 2
 ALNADO
 ALNAFE
 ALOBADADO
 alobado *v.* LOBÃO
 ALOCADO
 ALOGADOR
 ALOGAR

alojamiento *v.* ALOJAR
 ALOJAR
 ALON
 ALONDRA (COGVXADA)
 ALONGARSE
 alongero *v.* CARDO
 ALONIOLI
 ALONSO
 ALOQVE
 ALORA
 ALOXA (NIEVE)
 ALOXAMIENTO
 aloxar *v.* ALOXAMIENTO
 alpargatazo *v.* ALPARGATE
 ALPARGATE (ESPARTEÑA)
 alpargatero *v.* ALPARGATE
 ALPECHIN
 ALPES
 ALPICOCES
 ALPISTE
 ALPVXARRAS
 ALQVERIA
 ALQVERME
 ALQVERQVE
 ALQVICEL
 alquicer *v.* ALQVICEL
 ALQVILAR
 ALQVILE
 ALQVIMIA
 ALQVITARA (DISTILATORIO)
 ALQVITIRA
 ALQVITRAN
 ALQVIVICIO
 alsene *v.* ENSENSIOS
 alsenso *v.* ENSENSIOS
 ALTA (ESCVELA)
 ALTANERIA
 ALTANERO
 ALTAR
 alteracion *v.* ALTERAR
 ALTERAR
 ALTERCACION (ALTERCAR)

ALTERCAR
 ALTEZA
 altibaxo *v.* ALTO; ABAXAR;
 BAXAR
 altiveza *v.* ALTIVO
 ALTIVO
 ALTO (FONDO)
 altoçano *v.* TOÇAL; ALTOZANO
 ALTOZANO
 ALTRAMVZ
 ALVDIR
 ALVMBRAR
 ALVMBRE
 ALVNADO
 ALVQVETE 1 (ALCAHVETA)
 ALVQVETE 2, *s.* ALVAR
 alusion *v.* ALVDIR
 ALVZEMA (ESPLIEGO)
 ALVZINAR
 ALVA
 alvacea *v.* ALBACEA; TESTA-
 MENTO
 ALVALA (REGISTRAR)
 ALVAR
 Alvar *v.* ALVARO
 ALVARAZOS
 Alvarez *v.* ALVARO
 ALVARO
 ALVARQVOQVE
 ALVAYALDE
 ALVEDRIO
 ALVERCHIGO
 ALVERGVE
 ALVOR
 ALLANAR (LLANO)
 allegado *v.* ALLEGAR
 allegador *v.* ALLEGAR
 , ALLEGAR
 ALLENDE
 allosa *v.* ALMENDRA; ALLOZA
 ALLOZA (HIZNALLOZ;
 IERVSALEM)

allozar *v.* ALLOZA
 AMA
 AMABLE
 amada *v.* AMORES
 amador *v.* AMORES
 AMADRIADES
 AMAESTRAR
 AMAGAR
 amago *v.* AMAGAR
 AMAINAR
 AMALTHEA
 AMAMANTAR
 amancebada *v.* AMANCEBADO
 AMANCEBADO
 amancebamiento *v.* AMANCE-
 BADO
 amancillar *v.* MANCILLA
 AMANECER
 AMANSAR
 amante *v.* AMORES
 AMAÑARSE
 AMAPOLA
 AMAR
 AMARANTO
 amargaleja *v.* AMARGO
 AMARGO
 amargura *v.* AMARGO
 AMARILLIS
 AMARILLO
 amarrar *v.* AMARRAS
 AMARRAS
 AMASSAR
 AMATISTA
 AMAYA
 amazagatos *v.* GATEAR
 amazolado *v.* DESMAZOLADO
 AMAZONAS
 AMBAR
 AMBICION (AMBITO)
 AMBIDEXTRO
 amblador *v.* VEREDA
 AMBOS

AMBROLLA
 AMBROSIA
 AMBROSIO
 AMBROZ
 AMEDRENTAR
 AMEN
 AMENAZAR
 amenguado *v.* AMENGVAR
 AMENGVAR
 amenidad *v.* AMENO
 AMENO
 AMENTO
 AMESNADORES
 amesnar *v.* AMESNADORES
 amiento *v.* AMENTO
 amigado *v.* AMORES
 amigarse *v.* AMORES
 AMILANARSE (MILANO)
 AMMON
 AMO
 amodorrado *v.* MODORRO
 AMOHINARSE
 amojonarse *v.* MOJONERA
 AMOLAR
 AMOLLENTAR (MOLLENTAR)
 AMONESTACIONES
 amonestado *v.* AMONESTACIONES
 AMONESTAR
 amontar *v.* MONTON
 AMONTONAR (MONTON)
 AMOR (AMAR)
 AMORES (AMOR)
 amoricones *v.* AMORES
 amorio *v.* AMORES
 AMORTAJAR (MORTAJA)
 AMORTECERSE (DORMIR 2;
 MORTVORIO)
 AMORTIGVAR
 amortizacion *v.* AMORTIZAR
 AMORTIZAR
 AMOSCADOR
 amoscar *v.* AMOSCADOR

amostazado *v.* AMOSTAZARSE
 AMOSTAZARSE 1
 AMOSTAZARSE 2, *s.* MOSTAZA
 amotinado *v.* AMOTINARSE;
 MOTIN
 AMOTINARSE (MOTIN)
 AMPARAR
 AMPHIBIOS
 AMPHIBOLOGIA
 AMPHITEATRO
 AMPOLLA
 ampollado *v.* AMPOLLA
 ampolleta *v.* AMPOLLA
 ampollitá *v.* AMPOLLA
 ampudias *v.* AMPVRIAS
 AMPVRIAS
 AMVRATE
 AMVSGAR (MVSGO)
 ANA 1
 ANA 2, *s.* ANNA
 ANABATISTAS
 ANACALA
 anacalo *v.* ANACALA
 anacardina *v.* CARDO
 ANACHARSIS
 ANACHORITA
 ANADE
 ANADEAR
 ANADINO
 ANADON
 ANAFALLA
 ANAGOGIA
 ANALES
 ANAPELO (BERROS)
 ANAQVEL (POYO)
 ANASTASIO
 ANATA
 anatematizar *v.* ANATHEMA
 ANATHEMA
 ANATISTAS
 ANATOLIA
 ANATOMIA

anatomista *v.* ANATOMIA
 ANAXARCHO
 ANCA (NALGAS)
 ancianidad *v.* ANCIANO
 ANCIANO
 ANCORA
 ANÇVELO
 ancharia *v.* LARGO
 anchicorta *v.* ANCHO
 ANCHO (LARGO)
 ANCHOVA
 ANDABATES
 andador *v.* ANDAR
 andadura *v.* ANDAR
 ANDALVCIA
 ANDAMIO
 andante *v.* ANDAMIO
 ANDAR
 andas *v.* ANDAR
 anden *v.* ANDAMIO
 andora *v.* ANDAR
 ANDRAJO
 andrajoso *v.* ANDRAJO
 ANDRES
 ANDROGENO
 androgyno *v.* ANDROGENO;
 ERMAPHRODITA
 ANDVARES
 andurriales *v.* ANDAMIO
 ANDVXAR
 ANEGARSE
 anexidad *v.* ANEXO
 anxion *v.* ANEXO
 ANEXO
 ANGARILLAS
 ANGEL
 Angela *v.* ANGEL
 angelical *v.* ANGEL
 angelotes *v.* ANGEL
 ANGEO
 ANGOSTO
 angostura *v.* ANGOSTO

ANGVILLA
 anguillazo *v.* ANGVILLA
 ANGVLAR
 ANGVLO
 ANGVLOS
 ANGVSTIA
 ANHELAR
 anhelito *v.* ANHELAR
 anidar *v.* NIDO
 ANILLO
 ANIMA
 ANIMAL
 animar *v.* ANIMAL
 ANIME
 ANIMO (ANIMAL)
 animoso *v.* ANIMAL
 ANIÑADO (NIÑO)
 ANIS
 ANIVERSARIO
 ANNA
 annata *v.* ANATA
 ANOCHECER (NOCHE)
 ANOMALO
 ANOMIOS
 ANORIA
 ANOTOMIA
 ANSAR
 ansaron *v.* ANSAR
 ANSIA
 ansioso *v.* ANSIA
 ANTAÑO
 ANTE
 ANTECHRISTO
 ANTELACION
 ANTEMANO
 ANTENA
 ANTENADO (ALNADO; PADRAS-
 TRO)
 ANTE OMNIA
 ANTEPONER
 ANTEPVERTA
 ANTEQVERA

ANTERIOR
 ANTES
 ANTESIGNANO
 ANTICIPAR
 ANTIDOTO
 ANTIER
 ANTIFAZ (FAZ)
 ANTIFONA
 antigualla *v.* ANTIGVO
 antigüedad *v.* ANTIGVO
 ANTIGVO
 antipatia *v.* SIMPATIA
 antiquarios *v.* ANTIGVO
 antojadizo *v.* ANTOJOS
 ANTOJO
 ANTOJOS
 ANTORCHA (ENTORCHA)
 ANTROPOFAGO
 ANTROPOMORFITAS
 ANTRVEJO
 antruydo *v.* ANTRVEJO
 ANTVVIAR
 antuvion *v.* ANTVVIAR
 anublarse *v.* NVBLO
 anunciación *v.* ANVNCIAR
 ANVNCIAR 1
 ANVNCIAR 2, *s.* NVNCIO
 anuncio *v.* ANVNCIAR
 AÑACEA (*cf.* AÑAZEAS)
 añada *v.* ANATA
 añadido *v.* AÑADIDVRA
 AÑADIDVRA
 AÑADIR
 AÑAFIL
 AÑAGAZA
 AÑAL
 AÑAZEAS
 AÑAZMES (AXORCAS)
 añejarse *v.* AÑEJO
 AÑEJO
 AÑINO
 AÑIR

AÑO (AÑOVEZ)
 AÑOJO
 AÑOVEZ
 AÑVBLAR
 añublo *v.* AÑVBLAR
 AÑVDAR (ÑVDO)
 AOCAR
 AOJAR 1
 AOJAR 2, *s.* OJEAR
 AOSADAS
 APACENTAR
 apacibilidad *v.* APACIBLE
 APACIBLE (APLACER)
 APACIGVAR
 APADRINAR (PADRINO)
 APAGAR
 APALABRAR
 APALEAR
 APAÑAR
 APAR (= a par) *s.* PAR
 APARADOR (VASAR)
 APARAR
 APARATO
 APARCERIA
 aparcero *v.* APARCERIA
 APARECER
 APAREIAR
 aparejador *v.* APAREIAR
 aparejo *v.* APAREIAR
 aparente *v.* APARENCIA
 APARENCIA
 APARTADIJOS
 apartado *v.* APARTAR
 apartador *v.* APARTAR
 APARTAR
 APARTARSE
 apasionado *v.* APASSIONARSE
 APASSIONARSE (PASSION 2)
 APEAR
 APEARSE
 APECHVGAR 1
 APECHVGAR 2, *s.* PECHVGVERA

APEDREAR
 APEGARSE
 apelacion *v.* APELAR
 APELAR
 APELDAR
 APELDE
 APELMAZAR
 APELLIDAR
 apellido *v.* APELLIDAR
 APENAS
 APEONAR
 apercibido *v.* APERCIBIR
 apercibimiento *v.* APERCIBIR
 APERCIBIR
 APERO
 aperrocharse *v.* PERROQVIA
 APERSONADO *v.* PERSONA
 APESGAR
 apestado *v.* PESTE
 apestarse *v.* PESTE
 APETECER
 apetecible *v.* APETITOSO
 apetible *v.* APETITOSO
 APETITO
 APETITOSO
 apiadarse *v.* PIEDAD
 APILAR
 APIO
 apitonado *v.* APITONARSE
 APITONARSE
 APLACAR
 APLACER
 APLAVSO
 APLICAR
 APLOMAR
 APOCA (CARTA)
 APOCALYPSIS
 apocamiento *v.* APOCAR
 APOCAR
 APOCIMA
 APOCRIFO
 APODO

APOLLILLARSE (POLILLA)
 APOLOGIA
 APOLOGO
 APOPLEXIA
 APORCAR
 APORREAR
 APORTAR
 aposentador *v.* APOSENTAR
 APOSENTAR
 APOSENTO
 APOSTAR
 apostasia *v.* APOSTATA
 APOSTATA
 APOSTATAR
 APOSTEMA
 APOSTOL
 apostolado *v.* APOSTOL
 apostolico *v.* APOSTOL
 apostolo *v.* DIMISORIAS
 APOSTROFE
 apostura *v.* APVESTO
 APOTHEGMA
 APOYAR (POYO)
 apreciado *v.* APRECIAR
 apreciador *v.* APRECIAR
 APRECIAR (PRECIAR)
 APREHENDER
 apremiaduras *v.* APREMIAR
 APREMIAR (PREMIADO)
 APRENDER
 APRESTAR
 apretadera *v.* APRETAR
 apretador *v.* APRETAR
 apretamiento *v.* APRETAR
 apretantes *v.* APRETAR
 apreton *v.* APRETAR
 apretura *v.* APRETAR
 APRIESSA
 aprieto *v.* APRETAR
 APRISCO
 APRISIONAR
 APROBAR

APROPIAR
 aprovar *v.* PROVAR
 aprovechado *v.* APROVECHAR
 aprovechamiento *v.* APROVE-
 CHAR
 APROVECHAR (PROVECHO)
 APVESTA (APOSTAR)
 APVESTO
 apuntador *v.* APVNTAMIENTO
 APVNTALAR
 APVNTAMIENTO
 APVNTAR
 APVÑEAR
 APVRAR
 AQVEDAR
 AQVEL
 AQVENDE
 aquesta *v.* AQVESTE
 AQVESTE
 aquesto *v.* AQVESTE
 AQVEXAR (QVEXA)
 Aquilo *v.* BORREAS
 AQVILON
 AQVILLA
 ARA
 ARABACA
 arabes *v.* ARABIA
 ARABIA
 arabigo *v.* ARABIA
 ARADO
 ARADOR
 ARAGAN
 ARAGON
 ARAGONES
 ARAMBEL
 ARAMBRE (ALAMBRE)
 ARANCEL
 ARANDA
 ARANDELA
 ARANJVEZ
 ARAÑA 1, 2
 arañarse *v.* ARAÑO

arañiego *v.* ARAÑA 2
 ARAÑO
 arañuelo *v.* ARAÑA 2
 ARAR 1, *s.* ARADO
 ARAR 2
 ARAVCANA
 arbeja *v.* ARVEIA
 arbejones *v.* ARVEIA
 ARBITRIO (ALVEDRIO)
 ARBOL
 arboleda *v.* ARBOL
 ARBOLLON
 ARCA 1
 ARCA 2, *s.* ARQVILLA
 arcabuceria *v.* ARCAVZERO
 ARCAVZ
 arcabuzazo *v.* ARCAVZERO
 ARCAVZERO
 ARCADVZ
 ARCANGEL
 ARCAS (ARCA 2)
 Arcas *v.* ARCAS
 arcaz *v.* ARCA 1
 arcedianato *v.* ARCEDIANO
 arcedianazo *v.* ARCEDIANO
 ARCEDIANO
 ARCILLA
 ARCO
 ARÇOBISPO
 arçon *v.* ARZONES
 arcos *v.* ARCO
 ARCHERO *s.* ARQVERO
 ARCHETYP0
 archibanco *v.* ARQVILLA
 ARCHIMANDRITA (MANDRA)
 ARÇHIPIELAGO
 ARCHITECTO
 ARCHITRICLINIOS
 archivista *v.* ARQVILLA
 archivo *v.* ARQVILLA
 ARDER 1, 2
 ardid *v.* ARDER 1

- ardiente *v.* ARDER 1
ardor *v.* ARDER 1.
ARDVO
ARENA
ARENALES
arencado,-a *v.* SARDINA
ARENGA
ARENILLAS
arenisco *v.* ARENALES
ARENQVES (SARDINA)
AREOPAGITAS
AREOPAGO
ARESTIN
ARETINO
ARETVSA
AREVALO
AREZIFE *s.* ARRESTO
ARFIL (ALFERECIA; ELEFANTE)
ARGADILLO
argadixo *v.* ARGADILLO
argamandixo *v.* ARGADILLO
ARGAMASA (MAÇACOTE)
argamasilla *v.* ARGAMASA
ARGANAS
ARGANDA
ARGANO
ARGEL
ARGES
Argete *v.* ARGES
ARGILITA
ARGO
ARGOS
ARGVIR
ARGVLLOSO
argumento *v.* ARGVIR
arguyente *v.* ARGVIR
ariete *v.* CARNERO 2
ARILLOS
ARISCO
arismetica *v.* ARITHMETICA
ARISTA
ARISTOCRATIA
ARITHMETICA
ARIZA
ARJONA
arlequin *v.* ARNEQVIN 1
ARLO
arma *v.* ARMAR
armadixo *v.* ARGADILLO
armadura *v.* ARMAR
ARMAR
armario *v.* ALMARIO
armatoste *v.* ARMAR
ARMELLA
armero *v.* ARMAR
armilla *v.* ALMILLA; ARMELLA
ARMIÑO
ARMONIACO
ARMVELLES
ARNEQVIN 1, *s.* ARIZA
ARNEQVIN 2
ARNES
aro *v.* ÇVMILLO
aronia *v.* AZEROLA
arquear *v.* ARCO
ARQUERO (ARQVILLA)
arqueta *v.* ARQVILLA
arqueton *v.* ARQVILLA
ARQVILLA
arquitecto *v.* LABRAR
ARRAAX
ARRABAL
arrabon *v.* ARRAS
ARRACADAS 1, *s.* ARNEQVIN 2
ARRACADAS 2, *s.* ARRAS
ARRAEZ
arrahan *v.* ARRAYAN
arramblado *v.* BIBARRAMBLA;
RAMBLA
ARRANCAR (TRANCO)
ARRAPIEÇOS (CABEZON)
arraque *v.* ALQVERQVE
arraquibe *v.* ARRAQVIVE

ARRAQVIVE
 ARRAS (ARRACADAS 2)
 ARRASAR (RASO 2)
 attrastradura *v.* ARRASTRAR
 ARRASTRAR
 ARRXAQVE 1, *s.* ARRAYAN
 ARRXAQVE 2, *s.* ARRASTRAR
 ARRAYAN
 ARRAYGAR
 arraygarse *v.* RAYZES
 ARRAZIFE
 arreado *v.* ARREAR
 ARREAR
 ARREBAÑAR (REBAÑO)
 arreatador *v.* ARREBATAR
 arreatamiento *v.* ARREBATAR
 ARREBATAR
 arreboçarse *v.* REBOCIÑO
 ARREBOLA
 arrebolada *v.* ARREBOLA
 arrebolarse *v.* ARREBOLA
 arrecafes *v.* ARREZAFES
 atreciar *v.* RECIO
 ARREDRAR
 arredropelo *v.* ARREDRAR
 ARREGAÇAR *s.* REGAÇO
 ARREGAZAR
 ARRELDE
 ARRELLANARSE
 ARREMANGAR
 ARREMETER
 arremetida *v.* ARREMETER
 arrendador *v.* ARRENDAR
 arrendajo *v.* ARRENDAR
 ARRENDAR
 arteo *v.* ARREAR
 arrepentida *v.* ARREPENTIRSE
 arrepentimiento *v.* ARREPEN-
 TIRSE
 ARREPENTIRSE
 ARRESTAR
 ARRESTO

ARREZAFES
 ARRIAGA
 Arriano *v.* ARRIO
 ARRIATES
 ARRIBA
 arribar *v.* ARRIBA
 ARRIMAR (RIMA)
 arrimo *v.* ARRIMAR
 arrinconado *v.* ARRINCONARSE
 ARRINCONARSE (RINCON;
 ANGVLO)
 ARRIO
 arriogoriaga *v.* ARRIVGVRIAGA
 ARRISCAR
 arriscarse *v.* RISCO
 ARRITRANCA
 ARRIVGVRIAGA
 ARRIZAFA
 ARROBA
 ARROBAMIENTO
 ARROBARSE
 arrobero *v.* ARROBA
 arrocinado *v.* ROCIN
 ARRODILLAR
 arrodillarse *v.* RODILLA
 ARROGANCIA
 arrogante *v.* ARROGANCIA
 arrojadizo *v.* ARROJARSE
 ARROJAR
 ARROJARSE
 ARROLLAR
 arrompido *v.* ROMPER
 ARROMPIDOS
 ARROPARSE (ROPA)
 ARROPE
 ARROPEAS
 ARROSTRAR
 ARROYO
 ARROZ
 ARRVFALDADO (RVFIANESCA)
 ARRVGA
 arrugado *v.* RVGA

arrugar *v.* ARRVGA
 ARRVINAR
 ARRVLLAR
 ARRVMACO
 arruynado *v.* ARRVINAR
 ARSENAL
 ARSENICO
 ARSENIO
 ARTE
 ARTEMISA
 ARTERIA
 ARTERO 1, *s.* ARTE
 ARTERO 2, *s.* ARTERIA
 artesano *v.* ARTERO 1
 ARTESO
 ARTESONES
 ARTEXO
 ARTIAGA
 articular *v.* ARTICVLO
 ARTICVLO
 artifice *v.* ARTIFICIO
 artificial *v.* ARTIMAÑA
 ARTIFICIO
 artificioso *v.* ARTIFICIO
 ARTILLERIA
 ARTILLERO (ARTILLERIA)
 ARTIMAÑA
 artista *v.* ARTE
 ARVÑO
 ARVAS
 ARVEIA
 arveja *v.* GARBANÇO
 ARXONA
 ARZILLA
 ARZOLLA (ALLOZA; ALMENDRA)
 ARZVA
 AS (CANICVLA)
 ASA
 ASABIENDAS
 ASACAR
 asaco *v.* ASACAR
 asadura *v.* CORADA

ASALTO
 ASAR (CANICVLA; *cf.* ASSAR)
 ASARABACAR
 ASASINO
 ASAZ
 ASBERTO
 asciada *v.* AÇADA
 asciadon *v.* AÇADA
 ASCO
 ASCVA
 asear *v.* ASEO
 aselga *v.* ACELGA
 asellus *v.* MERLVZA
 asenderado *v.* SENDA
 ASEO
 asesar *v.* SESO
 ASIAL
 asicla *v.* ACELGA
 ASIDERO
 asiento *v.* ALJOFAR
 asilla *v.* ASA
 asion *v.* ACION
 ASIR 1, *s.* ASBERTO
 ASIR 2
 ASMA
 ASMAR
 asmatico *v.* ASMA
 ASNO (IVMENTO)
 ASPA
 aspalato *v.* ALARGEZ
 aspar *v.* ASPA
 aspaviento *v.* ASPA
 ASPECTO
 aspereza *v.* ASPERO
 ASPERO
 ASPIDE
 aspirar *v.* ESPIRITVAL
 asquerosito *v.* ASCO
 ASQVEROSO (ASCO)
 ASSADOR
 ASSADVRA
 assadurilla *v.* ASSADVRA

ASSAETADO
 ASSALTEAR
 ASSAR
 ASSAZ
 assechanza *v.* ASSECHAR
 ASSECHAR
 ASSEGVRRAR
 ASSENCIOS
 ASSENDEREAR
 assensios *v.* ENSENSIOS
 assentadera *v.* NALGAS; SIESO
 assentador *v.* ASSENTAR
 ASSENTAR (FLOREO)
 ASSENTIR
 ASSERRAR *s.* ASSERRAR
 asserradero *v.* ASSERRAR
 asserrador *v.* ASSERRAR
 asserradura *v.* ASSERRAR
 ASSERRAR
 ASSESOR
 assessoria *v.* ASSESOR
 ASSESTAR
 ASSI
 assiento *v.* ASSENTAR
 ASSIGNAR
 asistente *v.* ASSISTIR
 ASSISTIR
 assolamiento *v.* ASSOLAR
 ASSOLAR
 assomada *v.* ASSOMAR
 ASSOMAR
 assombramiento *v.* ASSOMBRAR
 ASSOMBRAR
 assomo *v.* ASSOMAR
 assonada *v.* ASSONAR
 ASSONAR
 ASSVSTAR
 ASTA
 astil *v.* ASTA
 ASTILLA
 astillera *v.* ASTA
 astillero *v.* ALANÇARSE

ASTORGA
 ASTROLABIO
 ASTROLOGIA
 ASTROLOGO
 ASTRONOMIA
 astroso (DESASTRADO)
 ASTVCIA
 ASTVRIAS
 asturion *v.* HACA
 astuto *v.* ASTVCIA
 ASYLO
 ATABAL
 atabalejo *v.* CORYBANTES
 atabalillo *v.* ATAMBOR
 ATACAR
 ATAHARRE
 ATAHONA
 ATAJAR
 atajo *v.* ATAXARSE
 ATALAR
 ATALAYA
 ATALAYA DE SERTORIO
 ATALVINA
 ATAMBOR (ATABAL)
 atamento *v.* ATAR
 ATANASIO
 ATANCAR
 ATANOR
 ATANQVIA
 ATAÑER
 ATAPAR
 atapiernas *v.* CENOGIL;
 AHINOJARSE
 ATAR
 ataraçana *v.* ARSENAL
 ATARANTADO (TARANTVLA)
 ATARAZANA
 atarfe *v.* TAMARIZ
 ATASCAR (TASCOS)
 ATAVD
 ataugia *v.* EMBLEMA
 ATAUXIA

ATAVIAR
 ATAXARSE *s.* ATAJAR
 ATAYFOR
 ataz *v.* DESTAZAR
 ATEMORIZAR
 atenaçar *v.* TENAÇAS
 ATENAS
 atencion *v.* ATENTO
 ATENDER (ATENTO)
 ateniense *v.* ATENAS
 atentado *v.* ATENTAR
 ATENTAR
 ATENTO
 aterecerse *v.* ATERIDO
 atericiado *v.* TIRICIA
 ATERIDO
 ATERRAR
 ATESORAR
 ATESTAR
 atheista *v.* ATHEO
 ATHEO
 ATHLETA
 ATIENTO
 ATINAR
 ATINCAR
 ATIZAR
 atlantes *v.* CAN; CARIATIDES
 ATLANTICO
 ATLAS
 ATOCHA
 atolladero *v.* ATOLLAR
 ATOLLAR
 ATOMO (TOMAR)
 ATONITO
 ATONTADO
 ATORAR
 ATORMENTAR
 atortugar *v.* GALAPAGO
 ATORTVXAR
 ATOSIGAR (TOSIGO)
 ATRAER
 atrahimiento *v.* ATRAER

atraillar *v.* TRAILLA
 ATRANCAR
 ATRAS
 ATRAVESAR
 atravessar *v.* ATRAVESAR
 ATRAYLLAR
 ATREGVADO (TREGVAS)
 atrevença *v.* ATREVIDO
 atrevencia *v.* ATREVIDO
 ATREVIDO
 atrevimiento *v.* ATREVIDO
 ATRIACA
 atriago *v.* AZIAGO
 ATRIBVIR
 ATRIBVLADO
 ATRIBVLAR
 atributo *v.* ATRIBVIR
 ATRIL
 atrio *v.* ATRIL
 atronado *v.* ATRONAR
 ATRONAR
 ATROPELLAR (TROPEL)
 ATROPOS
 ATROZ
 atufado *v.* ATVFARSE; TVFO
 ATVFARSE
 ATVN
 ATVRDIR
 ATVSAR
 AVDACIA
 audaz *v.* AVDACIA
 AVDIENCIA
 AVDITOR
 AVGVSTA
 AVGVSTINO
 AVLA
 aulico *v.* AVLA
 AVLLADOR
 AVLLAR
 aumentar *v.* AVMENTO
 AVMENTO
 AVN

AVN NO
 AVNA
 AVNADOS
 AVNARSE (VNO)
 auriflamen *v.* FLOR
 AVRORA
 ausencia *v.* AVSENTARSE
 AVSENTARSE
 AVSTERO
 austral *v.* AVSTRO
 AVSTRO
 AVTAN
 AVTENTICAR
 AVTENTICO
 AVTILLO
 AVTO
 AVTO DE FEE
 AVTOR
 AVTORIDAD 1, 2
 AVTORIZAR
 avad *v.* AVAOS
 AVANÇAR
 AVANÇO (AVANÇAR)
 AVANGVARDIA
 AVAOS
 avarca *v.* ABARCA
 avaricia *v.* AVARIENTO
 AVARIENTO
 AVARO (AVARIENTO)
 AVARRAZ
 AVE
 AVECHVCHO
 AVELLANA
 avellanado *v.* AVELLANO
 avellaneda *v.* AVELLANO
 AVELLANO
 AVENA
 AVENADO
 AVENENCIA
 AVENIDA
 avenirse *v.* AVENENCIA
 AVENTAJADO *s.* VENTAJA 1

AVENTAJARSE
 AVENTAR
 AVENTVRA
 AVER
 averiguacion *v.* AVERIGVADO
 AVERIGVADO
 AVERIGVAR
 AVERO
 AVERROES
 AVEZES
 AVEZINDADO
 AVEZINDARSE *s.* VEZINDAD
 AVIA
 AVIAR (VIAJE)
 AVICENA
 AVIESO
 AVILA
 AVILTAR
 AVION
 AVIS
 AVISAR
 ayiso *v.* AVISAR
 AVISPA
 AVOLEZA
 AX (OXETE)
 AXA 1, 2
 AXAQVECA
 AXAQVIENTO
 AXARABE
 AXARAFE
 AXARQVIA
 AXEDREA
 AXEDREZ (ESCAQVE)
 AXENVZ
 AXENXIOS
 axenxo *v.* ASSENCIOS
 AXIOMAS
 AXONIÑO
 AXORCAS (AÑAZMES)
 AXVAR (ALHAIA)
 AXVFAYNA
 AY

AYARQVIA
 AYER
 AYNA
 AYNAS
 AYO
 AYRADO
 AYRARSE *s.* IRA
 AYRE
 AYRONES
 AYSLARSE
 AYTONA
 AYVDA (CRISTEL; MELECINA)
 AYVDAR
 ayunar *v.* AYVNO
 AYVNO
 ayuntamiento *v.* AYVNTAR
 AYVNTAR (ALIADOS)
 AYVSO
 AZAGAYA
 AZAHAR
 AZAR (CANICVLA)
 AZARCON
 AZAVACHE
 AZCONA
 AZEBO
 AZEBVCHE
 AZECA
 AZECALAR
 azechar *v.* ASSECHAR
 AZECHE
 azedera *v.* AZEDO
 AZEDIA (AZEDO)
 Azedia *v.* AZEDIA
 AZEDO
 AZELGA
 AZEMILA (MVLO)
 azemilero *v.* AZEMILA
 azemilon *v.* AZEMILA
 azemite *v.* ACEMITE; CENCEÑO
 AZEÑA
 AZERADO
 AZERICO

AZERO
 AZEROLA
 AZEYTE
 azeytera *v.* ALCVZA; AZEYTVNA
 AZEYTVNA
 azeytuno *v.* AZEYTVNA
 AZIAGO
 AZIAL
 AZIBAR
 AZICATE
 AZIDIA
 AZIMO (LEVADVRA)
 azimos *v.* ACEMITE
 AZITARA
 AZOFAR
 AZOGE
 azoguejo *v.* AÇOGVEIO
 AZOMAR
 AZVDA
 azuela *v.* HACHA
 AZVL
 AZVLAQVE
 AZVLEJOS
 azutea *v.* TERRADO

B

B
 BABA (INFANTE; LANDRECILLA)
 BABADOR
 BABANCA
 BABATELES
 babazas *v.* BABA
 BABERA
 BABIA
 babieca *v.* BAMBARRIA
 BABIECA
 BABILONIA
 babsan *v.* BAVSAN
 baça *v.* BASA
 BAÇA 1
 BAÇA 2, *s.* BACILAR
 BACCO 1, 2

BACIA
 bacia*r v.* BACINADA
 BACILAR (BACVLO)
 bacin*v.* SERVIR
 BACINADA
 BAÇO
 BACVLO
 bachanalia*v.* BACCO
 BACHILLER
 bachillerear*v.* BACHILLER
 bachilleria*v.* BACHILLER
 BADA
 badagillo*v.* BADAJO
 badajada*v.* BADAJO
 BADAJO
 BADAJOZ
 BADAL
 BADANA
 BADEA (ALBVDECA)
 BADIL
 badilazo*v.* BADIL
 BADVLAQVE
 BAEZA
 BAGAGE
 bagamundo*v.* VAGAR
 BAGASA
 BAGASTA
 bagio*v.* ABAXAR
 BAHARI
 bahear*v.* BAHO
 BAHO
 BALA
 BALADI
 baladon*v.* BALDA
 BALADRON
 BALANÇA
 BALANCIN (ABALANÇARSE)
 BALAR
 BALAX 1, 2
 BALBASTRO
 BALBOA
 BALCON (FALCON 2)

BALDA
 balde (de)*v.* BALDA
 baldio*v.* BALDA
 BALDON
 BALDONADA
 BALDRES
 BALEARES
 balido*v.* BALAR
 balilia*v.* BALIXA
 balio*v.* BAYLIO
 BALIXA
 BALNADV
 BALON
 balona*v.* BALON
 BALOTA
 BALSA
 BALSAIN
 BALSAMO
 BALVARTE
 BALVMBÁ
 BALVASTRO
 BALLENA
 BALLESTA
 BALLESTERO
 BALLESTILLA
 bamba*v.* BAMBARRIA
 BAMBÁ 1, 2
 BAMBLEAR (BAYBEN)
 BAMBARRIA
 BAMBOLEAR
 BANCA 1
 BANCA 2, s. BANCOS
 bancario*v.* BANCO
 BANCO (BANCA)
 BANCOS DE FLANDES
 bandido*v.* BANDO
 BANDO
 bandolero*v.* BANDO
 BANDVRRIA (PANDVRRIA)
 banqueta*v.* BANCA 1
 BANQVETE
 BANQVETEAR

banquillo *v.* BANCA 1
 bañarse *v.* BAÑO
 BAÑO
 BAPTISMO
 BAPTISTA
 baptisterio *v.* BAPTIZAR
 BAPTIZAR
 BARAHA
 BARAHONA
 BARAHVSTE
 BARAJA
 barajar *v.* BARAJA
 BARAJAS
 baratar *v.* BARATO
 barateria *v.* BARATO
 BARATIJAS
 baratilla *v.* BARATO
 baratista *v.* BARATO
 BARATO
 baraton *v.* BARATO
 BARBA 1, 2, 3, 4
 BARBACANA
 BARBADA
 BARBARIA
 BARBARISMO
 BARBARO
 BARBASCO *s.* BARTOLOMICO
 BARBECHAR
 BARBECHO
 BARBICACHO
 barbiponiente *v.* BARBICACHO
 BARBO (BARBA 1)
 BARCA
 BARCEL
 BARCELONA
 BARDAXA
 BARITONO
 BARJVLETA (BOLSA)
 barlaventar *v.* BARLAVENTO
 BARLAVENTO
 BARNIZ (ENEBRO; GOMA)
 BARON 1, 2

baronia *v.* BARON
 barquillo *v.* OBLEA
 BARRA
 BARRACAS
 BARRACO
 BARRACHEL
 BARRAGAN
 barragana *v.* BARRAGAN
 barraganada *v.* BARRAGAN
 BARRANCO
 barredero *v.* BARRER
 barredura *v.* BARRER
 BARRENA
 barrenado *v.* BARRENA
 barrendero *v.* BARRER
 BARREÑA
 barreñon *v.* BARREÑA
 BARRER
 BARRERA
 BARRIGA (ARCA 2; VIENTRE)
 barrigudo *v.* BARRIGA
 BARRIL
 barrilla *v.* BARRA
 BARRIO
 barrisco *v.* BARRER
 barrito *v.* ELEFANTE
 BARRO 1, 2
 barroso *v.* BARRO 2
 BARROTE
 BARRVECO (ALJOFAR)
 BARRVNTAR
 Bartol *v.* BARTOLOMICO
 Bartolo *v.* BARTOLOMICO
 BARTOLOME
 BARTOLOMICO
 BASA
 BASILICA
 BASILICON
 BASILISCO (GVEVO)
 bassa *v.* BAXA
 BASSALLO
 BASTA 1, 2

bastage *v.* GANAPAN
 bastaje *v.* BASTA 2
 bastante *v.* BASTA 1
 bastarda *v.* BASTARDO
 bastardia *v.* BASTARDO
 BASTARDO
 bastecer *v.* BASTO
 BASTIDA
 BASTIDOR
 bastimento *v.* BASTO
 bastion *v.* BESTION 1
 BASTO (BASTON 3)
 BASTON 1, 2, 3 (BASTA 2)
 BASTOS
 batacazo *v.* BATIR
 BATALLA
 BATALLAR
 BATALLON
 BATAN
 batanero *v.* BATAN
 BATEL
 BATERIA (BATIR)
 batesano *v.* BAÇA
 BATICVLO
 BATIDERO
 BATIENTE (BATIR)
 BATHOJA
 batillo *v.* BRASA
 BATIR 1, 2 (BATAN)
 batis *v.* RAYA 2
 batos *v.* RAYA 2
 BATTOLOGIA
 BAVL (EMBAVLAR)
 BAVSAN (PAVSAN)
 baúsana *v.* BAVSAN
 baúsanas *v.* ADARVE
 bautismo *v.* BAPTISMO
 BAVA
 bavera *v.* BAVA
 BAXA (ALTA; ESCVELA)
 baxada *v.* ABAXAR; BAXAR
 BAXAR

BAXEL
 baxeza *v.* ABAXAR; BAXAR
 BAXILLA
 baxio *v.* BAXAR
 baxo *v.* ABAXAR; BAXAR; FONDO
 BAYA
 BAYAS
 BAYBEN
 BAYLAR (BAYLE; LOCURA)
 BAYLE
 BAYLIO
 BAYNA
 BAYO 1, *s.* BAYAS
 BAYO 2
 BAYOCCO
 BAYONA
 bayuleta *v.* BARJVLETA
 BAZA
 bazin *v.* BACIA
 bazinica *v.* BACIA
 bazinico *v.* BACIA
 bazinilla *v.* BACIA
 BAZO
 BEATA
 BEATERIO
 beatífico *v.* BEATITVD
 BEATILLA
 BEATITVD
 BEATO
 BEBEDIZOS
 BEBER 1, 2
 BEBLADA
 beborretear *v.* BEBER 2
 bebraje *v.* BREVAJE
 BECA
 becoquin *v.* BECA
 BEFA
 BEHEMOTH
 BEHETRA
 BEJA
 BEJAR
 BELDAD

BELFO (LABEONES)

beliaco *v.* BELIAL

BELIAL

BELILLA

Belisa *v.* ISABEL

BELITRE

BELMAR

BELOROFONTE

BELZEBVB

BELLEZA

BELLON

BELLOTA

BEN—

BENAVAR

BENAVENTE

BENDEZIR

BENDICION

beneficencia *v.* BENEFICIObeneficiado *v.* BENEFICIO

BENEFICIO (PRESTAMERA)

beneficio de natura *v.* BVEYbenefico *v.* BENEFICIObenevolencia *v.* BENEFICIObenevolo *v.* BENEFICIO

BENGALA

benignidad *v.* BENIGNO

BENIGNO

BENITO

BENJVI (MENJVI)

beodez *v.* BEODO

BEODO

BERBENA

Berberia *v.* BARBARIAberberisco *v.* BARBARIA

BERÇA

berças con capachos *v.*

HERREÑAL

bercera *v.* BERÇAberdascaços *v.* POLVO

BERENGENA

berengenero *v.* BERENGENA

BERGAMOTA

BERIL

BERLANGA

BERLENGVAS

bermegia *v.* BERMEJO

BERMEJO

BERMEJVELAS

BERMELLON (BERMEJO)

BERMVDO I

BERMVDO II

BERMVDO III

BERNABE

BERNARDINA

BERNARDINO

BERNARDO

BERNEGAL

BERNIA (BRAGADVRA;

HIBERNIA)

Berones *v.* BRIONES

BERRACO 1 s. BARRACO

BERRACO 2 (BARRACO)

berraza *v.* BERROSberriandez *v.* BERRACOberriondo *v.* BARRACO; BERRACO

BERROCAL (BERRVGA)

BERROS

berrueco *v.* BERRVGA

BERRVGA

BERVI

besamanos *v.* BESAR

BESAR

beso *v.* BESAR; BESVCAR

BESOS

BESTIA 1, 2

bestial *v.* BESTIA 2

BESTIALIDAD

BESTION 1, 2

BESVCAR

BESVGO

BESVQVETE

BETANZOS

Betica *v.* BETIS

BETIS

BETONICA (VETONICA)	biril <i>v.</i> BERIL
BETVLLA	BIRLOS
BETVN	BIRRETE
BETVRIA	BIRRHOS
BEXIGA	birsaleta <i>v.</i> BOLSA
BEXIGAS	BISAGRA
BEXIN (HONGO)	BISAGVELO
BEZAR	BISIESTO
BEZERRIL	bismalva <i>v.</i> DIALTEA
BEZERRO 1, 2	BISNAGA
BEZO (LABIO)	BISNIETO
BIAZAS	BISOJO
Bibafajalaufa <i>v.</i> BIBARRAMBLA	BISONTE
BIBALBVNAITAR	BISOÑO
Bibalbunaytar <i>v.</i> BIBARRAMBLA	BISPERAS
BIBALMAZAN	bissextil <i>v.</i> BISIESTO
BIBARRAMBLA	BIVDA
Bibarrea <i>v.</i> BIBARRAMBLA	bivora <i>v.</i> BIBORA
BIBARREHA	BIZARRIA (ABIGARRADO)
BIBATAVBIN (BIBARRAMBLA)	bizarro <i>v.</i> ABIGARRADO;
BIBLIA	BIZARRIA
bibliopola <i>v.</i> BIBLIA	BIZAZAS (BIAZAS; <i>cf.</i> BIÇAZAS)
biblioteca <i>v.</i> BIBLIA	BIZCOCHO
BIBORA	BIZMA
BIÇAZAS (<i>cf.</i> BIZAZAS)	bizmadeo <i>v.</i> BIZMA
BICOCA	Blai <i>v.</i> BIZMA
BICOS	BLANCA 1, 2
BIELDO	blanco <i>v.</i> BLANCA 1
BIEN	BLANDA
bienandante <i>v.</i> ANDAMIO	blandear <i>v.</i> BLANDA
bífido <i>v.</i> CIERVO	blando <i>v.</i> BLANDA
BIGAMO	BLANDON
BIGARDO	blandura <i>v.</i> BLANDA
bigarro <i>v.</i> ABIGARRADO	blanduxo <i>v.</i> BLANDA
BIGORNIA	BLANES
BIGOTES (MOSTACHO)	blanquear <i>v.</i> BLANCA 1
balance <i>v.</i> BALANÇA	blanquete <i>v.</i> ALVAYALDE
BILBAO	BLAO
bilma <i>v.</i> BIZMA	blasfemar <i>v.</i> BLASFEMIA
BILLON	BLASFEMIA
BIMESTRE	blasfemo <i>v.</i> BLASFEMIA
BINAR	BLASON

BLASONAR
 BLEDOS
 blezo *v.* BRIZO
 BOAL
 BOATO
 BOBADILLA
 bobalia *v.* BOBO 2
 bobarron *v.* BOBO 2
 BOBATICO
 bobear *v.* BOBO 2
 bobillo *v.* BOBO 2
 BOBO 1, 2 (BAMBARRIA)
 BOBO, 3
 BOCA
 BOCACI
 BOCADO
 BOCAL
 BOÇAL 1, 2
 bocanada *v.* BOCA
 Bocanegra *v.* BOCA
 bocaran *v.* BOCACI
 BOCEL
 BOCERO
 BOCINA
 BOCON
 BOCHIN
 BODA (REDOMA)
 BODEGA (BOTA)
 BODEGON (ENGAÑO; HIGVERA)
 BODEGONERO
 BODIGO
 bodocazo *v.* BODOQVE
 BODOQVE (ALBONDIGA)
 BOFENA
 BOFES
 BOFETADA
 BOFETAN
 BOFETON (BOFETADA)
 BOGA
 BOGADA (BVGADA; NIEVE)
 BOGAR

bogavante *v.* BOGAR;
 ESPALDERES
 boglia *v.* FORÇADO
 BOHARDO
 bohena *v.* BOFENA
 BOHEÑA
 BOHONERO (BOX)
 bohordo *v.* ESPADAÑA; IVNCO
 BOLA
 BOLADO
 bolandera *v.* BOLADO
 bolante *v.* BOLADO
 BOLAR
 BOLARMENICO
 bolatin *v.* BOLADO; BVRATO
 BOLCAR
 bolear *v.* BOLA
 BOLEO
 POLETIN
 boletto *v.* HONGO
 BOLICHE
 bolillo *v.* BOLA; PALILLOS
 BOLINA (SONDA)
 BOLO (BOLA)
 BOLOARMENICO
 BOLONIA
 BOLOS
 BOLSA (ESCARCELA)
 bolsico *v.* BOLSA
 bolson *v.* LINTEL
 boltario *v.* BOLVER
 bolteador *v.* BOLTEAR
 BOLTEAR
 BOLVER
 BOLLO
 BOLLOMAIMON
 BOMBA
 BOMBARDA (ARCABVZ)
 BONANÇA
 bonetada *v.* BONETE
 BONETE

bonetero *v.* BONETE
 bonetillo *v.* BONETE
 BOÑIGA (BVEY)
 BOOTES
 boqueada *v.* BOQVEAR
 BOQVEAR (BOCA)
 boqueron *v.* BOCA
 boquihundido *v.* BOCA
 boquimuelle *v.* BOCA
 boquirrubio *v.* BOCA
 boquiseco *v.* BOCA
 BORBOLLON
 bordador *v.* BORDAR
 bordadura *v.* BORDAR
 BORDAR
 BORDE (BASTARDO; BORDAR;
 BVRDEL)
 bordo *v.* BOHORDO
 BORDON 1, 2
 bordoncillo *v.* BORDON 2
 BORDONERO
 boreal *v.* BORRASCA
 BORGOÑA
 BORJA
 BORJE
 BORLA
 borlilla *v.* BORLA
 BORNE
 bornear *v.* BORNE
 BORNI
 BOROX
 BORRA
 BORRACHA (BORRACHO)
 borrachada *v.* BORRACHO
 borracheia *v.* BORRACHO
 borracheria *v.* BORRACHO
 borrachez *v.* BORRACHO
 BORRACHO
 BORRADOR
 borraja *v.* BVGLOSA
 BORRAR
 BORRASCA 1, *s.* BORREAS

BORRASCA 2, *s.* BORRAXA
 borrascoso *v.* BORRASCA
 borrasquilla *v.* BORRASCA
 BORRAX (ATINCAR)
 BORRAXA
 BORREAS
 BORREGO (BORRA)
 BORRENAS 1, *s.* BORRACHA
 BORRENAS 2, *s.* BORRASCA 2
 borrica *v.* BORRICO; BVRRA
 BORRICO
 borriquillo *v.* ASNO
 borron *v.* BORRAR
 BORZEGVI (BOLSA)
 BOSAR
 BOSCAJE (BOSQVEJAR)
 BOSQVE
 bosquear *v.* BVSCAR
 BOSQVEJAR
 bosquejo *v.* BOSQVEJAR
 BOSTEZAR
 bostezo *v.* BOSTEZAR
 BOTA (BORRACHA, BORRACHO)
 botador *v.* BOTAR 2
 BOTANA
 BOTAR 1, 2, 3
 BOTE 1, 2
 BOTERO
 botiboleo *v.* BOLEO; BOTE 2
 BOTICA
 BOTICARIO (FARMACOPOLA)
 BOTIJA
 botijon *v.* BOTIJA
 BOTILLER
 BOTILLERIA
 BOTIN
 botinillo *v.* BOTIN
 botivo *v.* BOTIN
 BOTO 1, 2
 BOTON
 boton de fuego *v.* CAVTERIO
 BOVEDA

BOX

BOYA 1, 2 (BOCHIN)

boyada *v.* BVEYboyeriço *v.* BVEY

BOZ

bozeria *v.* BOZbozezar *v.* BOSTEZAR

BOZINA (CVERNO)

bozinglero *v.* BOZ

BOZO

braçada *v.* BRAÇO 4; ANA 2braçalete *v.* BRAÇO 4; AXORCASbracear *v.* BRAÇO 4bracero *v.* BRAÇO 4

BRACO

BRAÇO 1, 2, 3, 4 (FLEMA)

brafon *v.* BRAHON

BRAFONERAS

BRAGA

bragado *v.* BRAGADVRA

BRAGADVRA

BRAGAS

braguero *v.* BRAGASbragueta *v.* BRAGASbragueton *v.* BRAGAS

BRAHON

BRAMANTE

BRAMAR

bramido *v.* BRAMAR

BRANCADA (AGALLA)

brancas *v.* AGALLA

BRASA

braserito *v.* BRASAbrasero *v.* BRASA

BRASIL

bravata *v.* BRAVObravear *v.* BRAVObraveza *v.* BRAVO

BRAVO

bravonel *v.* BRAVObrazon *v.* BLASON

BREA

brebaxo *v.* BEBER 2breço *v.* BREZO 1

BREGA

bregar *v.* BREGAbreguero *v.* BREGA

BRENCA (CVLANTRILLO)

BREÑA

BRETAÑA

BRETE

BRETON (BROTAR)

BRETONICA

BREVA (ALBACORA; HIGO)

BREVAJE

BREVE (ABREVIAR)

brevedad *v.* BREVIARIO

BREVIARIO

BREZO 1, s. BREA (COMBLEZA)

BREZO 2

BRIAL

bríço *v.* COMBLEZA (*cf.* BRIZO)

BRIDA

bridon *v.* BRIDA

BRIGA (BREGA)

briga *v.* ABRIGObrigones *v.* BRIGA

BRINCAR

brinco *v.* BRINCAR

BRINDAR

brindez *v.* BRINDAR

BRINDEZ

BRIO

BRIONES

brisas de enero *v.* HALCIONESbrivia *v.* BRIVION

BRIVIESCA

BRIVION

brizar *v.* BRIZO

BRIZO (COMBLEZA)

BROCA

BROÇA

brocado *v.* BROCAbrocal *v.* BROCA

brocha *v.* BROCA
 BROCHERO
 brochon *v.* BROCA; PINCEL
 BRODIO
 BRODISTA
 BROMA
 BRONCO
 BRONZE
 BROQVEL (BROCA)
 broquelero *v.* BROCA
 BROSLADOR
 brosladura *v.* BROSLADOR
 broslar *v.* BROSLADOR
 BROTAR
 broton *v.* BROCA; BROTAR;
 BRETON
 BROZNO
 BRVMAR
 BRVNETE
 bruñidor *v.* BRVÑIR
 BRVÑIR
 BRVSCO (IVSBARBA 1)
 brutal *v.* BRVTO
 BRVTO
 BRVXA
 bruxo *v.* BRVXA
 BRVXVLA
 bruxulear *v.* BRVXVLA
 BRVZOS (DE BRVZOS)
 BVBAS (*cf.* BVVAS)
 buboso *v.* BVBAS
 BVCARO
 BVCEFALO
 bucha *v.* BVCHE
 BVCHE
 BVCHORNO
 BVEITRE
 bueitrera *v.* BVEITRE
 BVELO (FABRICA)
 BVELTO (BOLVER)
 BVELTOS *s.* BOLVER
 BVENO

BVETAGOS
 BVEY (VACA)
 buf *v.* BOHORDO
 BVFALO
 BVFAR
 BVFETE
 bufido *v.* BVFAR
 bufo *v.* BVFAR; BOHONERO;
 PAPOS
 BVFON
 BVFOS
 BVGADA
 BVGETA
 BVGIA
 BVGLOSA
 buhada *v.* BVHO
 BVHO
 BVHONERO
 BVIDO
 buir *v.* BVIDO
 buitrera *v.* BVITRON
 BVITRON 1, *s.* BVEITRE
 BVITRON 2, *s.* BVIDO
 BVLA
 BVLDEROS
 buleto *v.* BOLETIN; BVLA
 buljaca *v.* BVRJACA
 BVLTO
 BVLLA (BVLLIR; AMPOLLA)
 bullicio *v.* BVLLIR
 bullicioso *v.* BVLLIR
 BVLLIR
 buñolera *v.* BVÑVELO
 BVÑVELO
 buraco *v.* HORADO
 buratin *v.* BVRATO
 BVRATO
 BVRBVJA
 burbujo *v.* BVRBVJA
 BVRDEGANO
 BVRDEL (BORDE)
 burdo *v.* BVRDEL

BVREO
 BVRGALÉSES (PEPIONES)
 BVRGAS (ABRIGO)
 BVRGO
 BVRGOS
 BVRIEL (ESBIRRO; GRIS)
 BVRIŁ
 BVRJACA
 BVRLA
 burlador *v.* BVRLA
 burlon *v.* BVRLA
 BVRRÁ (ESBIRRO)
 burras *v.* BIRRETE
 BVRRIANA
 burro *v.* BORRICO
 bursaca *v.* BOSLA
 burseguí *v.* BOLSA
 burşuleta *v.* BARJVLETA
 BVRVJO
 BVRVJON
 burula *v.* BVRLA
 burxaca *v.* BOLSA
 BVSCAR
 BVSCO
 busola *v.* BRVXVLA
 BVSTOS
 BVSVLA (BRVXVLA; BVXVLA)
 BVVAS (*cf.* BVBAS)
 BVXARRON 1, *s.* BVXVLA
 BVXARRON 2, *s.* BVXETA
 buxeria *v.* BOHONERO; BOX
 BVXETA (BOHONERO; BOX)
 buxonero *v.* BOX
 BVXVLA *s.* BVGETA
 BVZ (BESAR)
 BVZANO
 BVZOS
 byrrhos *v.* BIRRETE

C

C

CABAL

CABALA
 cabalístico *v.* CABALA
 caballo (edad del —) *v.* CERRAR
 CABAÑA
 CABAÑVELAS
 CABDALES
 cabdel *v.* CABEÇA
 CABDELLADOR
 CABDELLAR
 cabdillo *v.* CABDELLADOR
 CABE
 CABEÇA
 cabeça de tordo *v.* ATVRDIR
 cabeçada *v.* CABEÇA
 cabeçal *v.* CABEÇA; ARCHITRI-
 CLINOS
 cabeçalero *v.* CABEÇA; ALBACEA;
 TESTAMENTO
 cabecear *v.* CABEÇA
 cabecera *v.* CABEÇA
 cabeço *v.* CABEÇA
 cabeçon *v.* CABEZON; FALQVIAS
 cabeçudo *v.* CABEÇA
 cabeçuela *v.* CABEÇA
 cabelladura *v.* CABELLO
 CABELLERA
 CABELLO
 CABER
 cabero *v.* CABO
 cabestrero *v.* CABESTRO
 CABESTRILLO (CABESTRO)
 CABESTRO *s.* CABIDA
 CABEZON
 CABIDA
 ÇABIDA *s.* ÇATICO
 CABILDO (CAPITVLO)
 cabizeaydo *v.* CABEÇA
 cabizmordido *v.* CABEÇA
 CABO
 ÇABORDAR
 CABRA (CORNVDO)
 CABRAHIGO (HIGVERA)

CABRAS *s.* CABRON
 cabrejas *v.* CABRERA; CABRERO
 CABRERA
 CABRERO
 CABRILLAS
 CABRIO
 CABRIOLA (BRINCAR)
 cabriolo *v.* CABRIOLA
 cabrita *v.* CABRITO
 cabritilla *v.* CABRITO
 CABRITO
 CABRON (CORNUDO)
 cabruno *v.* CABRAS
 ÇABVLLIR
 CACA
 CAÇA
 CAÇADOR
 CAÇALAOILLA
 CAÇALLA
 caçar *v.* CAÇA
 CACAREAR
 ÇACATIN
 CACERES
 CACIQVE
 CACO
 CAÇO
 CACODAEMON
 caçoleta *v.* CAÇO
 caçolexa *v.* CAÇO
 CAÇON
 CAÇORLA 1, *s.* CACERES
 CAÇORLA 2
 caçuela *v.* CAÇO
 caçurla *v.* CAÇVRRAS
 CAÇVRRAS
 caçurro *v.* CAÇVRRAS
 CACHAS
 CACHERA (FRAÇADA)
 CACHETE
 CACHIGORDETE
 CACHIVACHES
 CACHO 1, *s.* CAÇVRRAS

CACHO 2 (CACHETE; GACHO)
 CACHONDA
 cachondez *v.* CACHONDA
 CACHORRO (CACHONDA)
 CACHVELA (CACHAS)
 CADA
 CADAHALSO (TABLADO)
 CADAÑERA
 CADENA
 CADENETA
 CADERA
 CADILLOS
 cadira *v.* CATEDRA
 CADIZ
 CADOZO
 CADVCO
 caediço *v.* CAIDA
 CAER
 caerse los brazos *v.* FLEMA
 ÇAFARI
 ÇAFERIA
 CAFILA
 ÇAFIO
 ÇAFIR
 ÇAFRA
 ÇAGA
 cagada *v.* CAGAR
 CAGAFOGO
 ÇAGAL
 çagala *v.* ÇAGAL
 çagalejo *v.* ÇAGAL
 cagalera *v.* CAGAR
 CAGAR
 cagarruta *v.* CAGAR
 cagatorio *v.* CAGAR
 cagon *v.* CAGAR
 ÇAGVAN
 çaguero *v.* ÇAGA
 çahara *v.* ÇAHARENO
 ÇAHARENO
 ÇAHARRON
 ÇAHENES

ÇAHERIR
 ÇAHINAS
 CAHIZ
 ÇAHON
 ÇAHOR
 ÇAHORI
 ÇAHVRDA
 caiada *v.* CAYADO
 CAIDA
 ÇAIDA
 ÇAINO
 CAL (CALLE)
 CALA 1, 2
 ÇALA
 CALABAÇA (CORCOBA)
 calabçada *v.* CALABAÇA
 calabçate *v.* CALABAÇA
 CALABAZANOS
 CALABERA *s.* CALATRAVA
 (CALABRIADA)
 calaberna *v.* CALABERA
 calabogo *v.* CARCEL
 CALABRIA
 CALABRIADA (ALOQVE)
 calafa *v.* CALEPHA
 calafatar *v.* CALAFATE
 CALAFATE
 calafatear *v.* CALAFATE
 ÇALAGARDA
 CALAHORRA
 CALAMAR
 CALAMBRE
 CALAMIDAD
 calamistrato *v.* CABELLO
 CALAMITA
 calamitoso *v.* CALAMIDAD
 CALAMON (PORFIRION)
 CALANDRIA
 CALAR (CALABOZO)
 CALATAÑOZ
 CALATAYVD
 CALATRAVA

calça *v.* CALÇAS; TALEGA
 CALÇADA
 CALÇADO
 CALÇADOR
 CALCAÑAL (CARCAÑAL)
 CALÇAR
 CALÇAS
 calças de diablo *v.* FOLLADO
 CALCEDONIA
 calcetero *v.* CALÇAS
 calcina *v.* CAL
 calçon *v.* CALÇAS; ÇAHON
 calculator *v.* CONTADOR 2
 caldehita *v.* CALLE
 CALDERA (PENDOLA)
 caldereria *v.* CALDERERO
 CALDERERO
 calderilla *v.* CALDERA
 CALDERINO
 CALDERO
 CALDERON
 CALDO
 ÇALEA
 ÇALEMA
 CALEND *s.* CALENDARIOS
 CALENDARIOS
 CALENDAS
 calentador *v.* CALENTVRA
 CALENTAR 1
 CALENTAR 2, *s.* CALLE
 CALENTVRA
 CALEPHA
 CALERA (CAL)
 calero *v.* CALERA
 CALICVD
 CALIDAD
 caliente *v.* CALENTVRA
 calificacion *v.* CALIFICAR
 calificador *v.* CALIFICAR
 CALIFICAR
 CALIGVLA
 CALINA

CALISTO
 CALIZ 1, 2
 CALMA 1
 CALMA 2, s. CALLO
 CALNADO (CANDADO)
 CALONGIA (CANONIGO)
 CALONIA
 caloña *v.* CALONIA
 CALOR
 CALOSTRO (LECHE)
 CALPE
 CALVMNIA
 CALVA
 calvar *v.* CALVA
 CALVARIO
 CALVATRVENO
 calvo *v.* CALVA
 callado *v.* CALLAR
 CALLAR
 Callar *v.* CALLAR
 callares *v.* CALLAR
 CALLE (ENCALLARSE)
 calleja *v.* CALLE
 callejera *v.* CALLE
 callejon *v.* CALLE
 callejuela *v.* CALLE
 callentar *v.* CALENTAR 1
 CALLO
 calloso *v.* CALLO
 CAMA (CAMAS; CMBAS)
 CAMAFEO
 CAMAL 1, 2
 CAMALEON
 CAMARA (CONSEIO DE CAMARA)
 CAMARADA
 camaraje *v.* CONSEIO DE CAMARA
 camaranchon *v.* CONSEIO DE
 CAMARA
 CAMARERO (CONSEIO DE
 CAMARA)
 ÇAMARILLA
 camarin *v.* CAMARA

CAMARISTA
 CAMARLENGO
 CAMAROIA
 camaroja *v.* CHICORIA; ENDIBIA;
 CAMAROIA
 CAMARON
 çamarra *v.* ÇAMARRO
 çamarrear *v.* ÇAMARRO
 ÇAMARRO
 camarroja *v.* CAMAROIA;
 CHICORIA; ENDIBIA
 CAMAS
 CMBALACHE
 CMBAS
 CMBIO
 ÇAMBO
 CMBRAI
 CMBRON
 cambronera *v.* CMBRON
 CAMELOTE s. CAMELLA 2
 CAMELLA 1
 CAMELLA 2, s. CAMELLO
 CAMELLO (DROMEDARIO)
 CAMINO
 CAMINO DE PLATA
 CAMISA
 camisilla *v.* CASTAÑA
 camisola *v.* CAMISA
 camison *v.* CAMISA
 camisote *v.* CAMISA
 camomilla *v.* MANÇANILLA
 ÇAMORA
 CAMPANA
 campanario *v.* CAMPANA
 CAMPANIA
 campanil *v.* CAMPANA
 campanilla *v.* CAMPANA
 campaña *v.* CAMPO
 ÇAMPARSE
 CAMPEADOR
 CAMPEAR s. CAMPO
 CAMPIÑA

CAMPO (CAMPIÑA)
 campo *v.* ESTEVADO
 CAMPOÑA
 CAMPVZAR
 CAMVESA
 CAMVZA
 CAN (CANICVLA)
 CANA
 ÇANAHORIA
 CANAL 1, 2
 CANALLA
 CANARIAS
 canario *v.* CANARIAS; ESCVELA
 CANASTA
 canasto *v.* CANASTA
 ÇANCA
 çancadilla *v.* ÇANCA
 ÇANCAJO
 çancajoso *v.* CANCAJO
 CANCANILLA
 çancarron *v.* ÇANCAJO
 CANCEL
 cancelar *v.* CANCELLER
 cancelaria *v.* CANCELLER
 cancelario *v.* CANCELLER
 CANCER
 cancerarse *v.* CANCER
 CANCEVERO
 CANCELERIA (*sic*)
 CANCELLER
 CANCION (CANTAR)
 cancionero *v.* CANTAR
 ÇANCO
 çancudo *v.* ÇANCO
 CANDADO
 CANDAMO
 candar *v.* CANDADO
 CANDEAL
 candeda *v.* CANDAMO
 CANDELA (ALCANDORA; CERA;
 GORDOLOBO)
 candelero *v.* CANDELERO

CANDELERO
 CANDELILLA
 CANDIA
 candidato *v.* BLANCA 1
 CANDIL
 CANDILADA
 candiota *v.* CANDIA
 candiote *v.* CANDIA
 ÇANEFA (FILATERIA)
 CANELA
 CANELONES
 CANFOR
 ÇANGANO
 CANGILON
 cangrejo *v.* CANGILON
 CANICVLA *s.* CAN (CANICVLARES)
 CANICVLARES
 canil *v.* ÇANINA
 CANILLA (AGVA)
 canillero *v.* CANILLA
 CANINA *s.* CANICVLA
 ÇANJA
 CANO (CANA)
 CANOA
 CANON 1
 CANON 2, *s.* CANONIGO
 canonicato *v.* CANONIGO
 CANONIGO
 canonista *v.* CANON
 canonizacion *v.* CANONIZAR
 CANONIZAR
 çanquear *v.* ÇANCA
 çanquivano *v.* ÇANCA
 CANSADO
 cansancio *v.* CANSADO
 cansar(*se*) *v.* CANSADO
 CANTABRIA
 cantabro *v.* CANTABRIA
 CANTAR
 cantara *v.* CANTARO
 cantarera *v.* CANTARERO
 CANTARERO

CANTARES
 CANTARIDES
 cantarilla, -o, *v.* CANTARERO
 CANTARO (CANTARERO)
 cantera *v.* CANTON
 CANTERO (CANTON)
 CANTIDAD
 CANTIMPLORA *s.* CANTINA
 (GARRAFA)
 CANTINA
 CANTO 1, *s.* CANTARES
 CANTO 2, 3
 CANTON (ESQVINADO)
 cantonada *v.* CANTON
 cantonera *v.* CANTON
 CANTONES
 cantor *v.* CANTAR
 CANTVESO
 CAÑA (CANA)
 CAÑAFISTOLA (CAÑA)
 CAÑAHEIA
 cañaheja *v.* CAÑAHEIA
 cañaherla *v.* CAÑAHEIA
 cañal *v.* CAÑA
 cañamaço *v.* CAMISA
 CAÑAMAR
 CAÑAMAZO (*cf.* CAÑAMAÇO)
 cañamiel *v.* CAÑA
 cañamisa *v.* CAÑAMO
 CAÑAMO
 CAÑAMON
 cañaveral *v.* CAÑA
 CAÑETE *s.* CAÑAFISTOLA
 cañilla *v.* CAÑA
 CAÑIZARES *s.* CAÑA
 cañizo *v.* CAÑA
 CAÑO *s.* CAÑON
 CAÑON *s.* CAÑVTO (ARCABVZ)
 cañonear *v.* ARCABVZ
 cañonera *v.* CAÑON
 cañuteria *v.* CAÑVTO

cañutillo *v.* CAÑVTO
 CAÑVTO *s.* CAÑAHEIA
 caosta *v.* CLAVSTRO 1
 CAPA
 capacete *v.* ALMETE
 capacidad *v.* CAPAZ
 CAPADILLO (CHILINDRON)
 capado *v.* CABRON
 CAPAPVERCAS
 CAPAR *s.* CAPAZ
 caparazon *v.* CAPA
 CAPARDIEL
 CAPARI
 CAPARRA
 CAPARROSA (VITRIOLO)
 ÇAPATA
 CAPATAZ
 çapateador *v.* ÇAPATO
 çapatear *v.* ÇAPATO
 ÇAPATERA
 ÇAPATERIA
 çapatero *v.* ÇAPATO
 çapateta *v.* ÇAPATO
 çapatilla *v.* ÇAPATERIA
 ÇAPATO
 çapaton *v.* ÇAPATERIA
 CAPAZ
 CAPAZO *s.* CAPA
 capear *v.* CAPA
 CAPELINA
 CAPELO 1, 2 (CARDENAL)
 capellan *v.* CAPILLA 2
 capellania *v.* CAPILLA 2
 CAPELLAR
 capigorrista *v.* GORRA
 CAPILLA 1, 2, 3
 CAPILLO
 capiron *v.* CAPIROTE
 CAPIROTADA
 CAPIROTE
 capisayo *v.* CAPA

CAPISCOL
 CAPISCOLIA
 CAPITAN
 capitanear *v.* CAPITAN
 CAPITEL
 CAPITOLINO
 CAPITOLIO 1, *s.* CAMPANIA
 CAPITOLIO 2, *s.* CAPITEL
 CAPITVLACIONES
 capitulante *v.* CAPITVLO
 capitular *v.* CAPITVLO
 CAPITVLO (CABILDO)
 CAPON *s.* CAPITVLACIONES
 (CAPAR; CABRON; GALLO)
 CAPONERA
 CAPONES DE CENIZA *s.* CAPAR
 CAPOTE *s.* CAPVZ (CAPA)
 capotillo *v.* CAPA
 captivar *v.* CAPTIVIDAD
 CAPTIVERIO *s.* CAVTIVO
 CAPTIVIDAD
 CAPTIVO (CAVTIVO)
 CAPVLLO
 CAPVZ
 ÇAQVE
 ÇAQVIÇAMI
 CARA 1, 2, 3
 ÇARA
 CARABANA *s.* CARAVZ
 ÇARABANDA
 CARABO
 ÇARAÇAS
 CARACENA *s.* CARIÑO
 CARACOL
 CARACOLES *s.* CARANTOÑA
 caracter *v.* CARATER
 ÇARAGATONA
 çaragoci *v.* ÇARAGOZA
 ÇARAGOZA
 ÇARAGVELLES
 CARAMBANO
 CARAMBOLA

CAMELES
 CARAMILLO (ENCARAMAR)
 ÇARANDA (CRIVO)
 CARANTOÑA
 CARAPVZA
 ÇARATAN (CANCER)
 CARATER
 CARATVLA
 CARAVZ
 CARAVAJALES
 CARAVELA
 CARBON
 CARBONADA
 carbonero, -a, *v.* CARBON
 carbunco *v.* CARBON
 carbunculo *v.* CARBON
 ÇARCA
 çarça *v.* ÇARAÇAS; ESCARAMVJO
 (*cf.* ÇARZA)
 ÇARÇAGAN
 çarçaganete *v.* ÇARÇAGAN
 ÇARÇAHAN
 carcaj *v.* CARCAX
 CARCAJADA
 çarçamora *v.* ÇARZA
 CARCAÑAL (TALON)
 ÇARÇAPARRILLA
 carcassada *v.* CARCAJADA
 CARCAVA (CAVA)
 CARCAVON
 CARCAX
 CARCAXADA (ARCA 2)
 çarcear *v.* ÇARZA
 CARCEL
 carceleria *v.* CARCELERO
 CARCELERO
 ÇARCETA (ÇARZA)
 ÇARCILLOS (ÇARAÇAS)
 çarco *v.* ÇARCA; AZARCON
 çarço *v.* ÇARZA
 CARCOMA
 carcomer(*se*) *v.* CARCOMA

carcomiento *v.* CARCOMA
 ÇARÇVELA
 carchesia *v.* CARCAX
 CARDA
 cardar *v.* CARDA
 CARDENA
 CARDENAL
 CARDENCHA
 CARDENILLO
 cardilla *v.* CORAÇON
 CARDILLO
 cardin *v.* EXE 1
 CARDO
 carducha *v.* CARDA
 carear *v.* CARA 3; AFRONTAR
 CARECER
 CARENA (BREA)
 CARESTIA *s.* CARO (CARECER)
 CARGA
 cargar *v.* CARGO
 cargazon *v.* CARGO
 CARGO (PROVINCIA)
 CARIACONTECIDO (ACONTECER)
 cariaguileño *v.* CARICVERDO
 CARIATIDES
 CARICIA (CARESTIA)
 CARICVERDO
 CARIDAD
 carilargo *v.* CARICVERDO
 carillejo *v.* CARILLO
 CARILLO
 carina *v.* ENDECHAS
 CARIÑO 1, *s.* CARESTIA
 CARIÑO 2
 cariredondo *v.* CARICVERDO
 CARISEA
 caritativo *v.* CARIDAD
 CARLANCAS
 carlear *v.* CARLANCAS
 carlina *v.* CARDO
 CARLINES (FILIPOS)
 CARLOS

carmel *v.* CARMEN
 carmelita *v.* CARMEN
 CARMEN
 carmenador *v.* CARMENAR
 CARMENAR
 CARMESI (GRANA)
 CARMIN
 CARMONA
 CARNAL (CARNE)
 carnalidad *v.* CARNE
 carnaval *v.* CARNAL
 carnaza *v.* ENVES
 CARNE (CARNERO 1; CARNE-
 MOMIA)
 CARNEMOMIA
 CARNERO 1, 2 (CAPAR; GVESSO)
 CARNESTOLENDAS *s.* CARNICOL
 (CARNAL)
 CARNIBORO
 carniceria *v.* CARNEMOMIA
 carnicero *v.* CARNEMOMIA;
 CORTAR
 CARNICOL
 carnívora *v.* CARNE
 carniza *v.* CARNEMOMIA
 carnosidad *v.* CARNEMOMIA
 CARO 1, *s.* CARACOLES
 CARO 2, *s.* CARNIBORO
 caro (hacer el —) *v.* ANTENA
 CARPA
 çarpa *v.* ÇARPAR
 ÇARPAR
 çarpastroso *v.* ÇARPAR
 carpido *v.* CARPIR
 carpintear *v.* CARPINTERO
 carpintera *v.* CARPINTERO
 CARPINTERO
 CARPIO
 CARPIR
 CARRACA
 ÇARRACATIN
 çarrapastroso *v.* ÇARPAR

CARRASCA (ESCASO)
 carrascal *v.* CARRASCA
 carrascosa *v.* CARRASCA
 carraspada *v.* RASPAR
 carrasqueño *v.* CARRASCA
 carrastolendas *v.* CARNAL
 carrer *v.* CALLE; CARRERA
 CARRERA
 CARRETA
 CARRETERO (CARRO 2)
 carretilla *v.* CARRETERO
 CARRETON (CARRETERA)
 carretoncillo *v.* CARRETERA
 CARRICOHE (CHERRION)
 CARRIL (EXORBITANTE)
 carrillada *v.* CARRILLO 2
 CARRILLO 1, 2
 CARRION
 carrizal *v.* CARRIZO
 CARRIZO 1, *s.* CARRILLO
 CARRIZO 2, *s.* CARRO 2
 CARRO 1, 2
 CARROÑA
 CARROZ
 CARROZA (CARRO 1)
 CARRVAGE
 CARRVS
 CARRVXADO
 CARTA
 CARTABON (CARTA)
 cartacuenta *v.* CARTA
 CARTAGENA
 CARTAGO
 cartanova *v.* CARTA
 cartapacio *v.* CARTA
 cartapel *v.* CARTA
 cartear *v.* CARTA
 cartel *v.* CARTA
 cartela *v.* CARTA
 cartero *v.* CARTA
 cartilla *v.* CARTA
 carton *v.* CARTA; PAPELES

CARTVXA
 cartuxano *v.* CARTVXA
 ÇARZA
 ÇAS
 CASA
 casa de San Anton *v.* CONTA-
 GIOSO
 casa de San Lazaro *v.* CONTA-
 GIOSO
 CASACA
 casada *v.* CASADO
 CASADO
 CASAMATA
 casamentero *v.* CASA
 casamiento *v.* CASA
 casar *v.* CASA; GAMELLA 1
 CASCA
 CASCABEL
 cascabelada *v.* CASCABEL
 CASCADO
 cascajal *v.* CASCA; CASCAJO
 CASCAJO
 CASCAPÍÑONES
 CASCAR
 CASCARA
 CASCARON
 CASCO
 cascote *v.* CASCAJO
 CASERA
 CASERO (CASERA)
 CASI
 CASIA (CAÑAFISTOLA; CANELA)
 casiaca *v.* CASACA
 CASILDA
 casilla *v.* CASA
 CASO 1, 2
 CASPA
 CASQVETADA *s.* CASCADO
 casquete *v.* CASCO
 CASQVILLO *s.* CASQVETADA
 CASSAR *s.* CASAMATA
 CASTA

CASTAÑA (CASTAÑETA)	CATASTROPHE
CASTAÑAR	CATECISMO
CASTAÑETA	CATECVMENO
castañetear <i>v.</i> CASTAÑETA	CATECHIZAR
CASTAÑO (CASTAÑA)	CATEDRA
CASTELLANO	CATEDRAL
CASTIDAD	catedrar <i>v.</i> CATEDRATICO
castigacion <i>v.</i> CASTIGAR 2	CATEDRATICO
CASTIGAR 1, 2	CATEGORIA
castigo <i>v.</i> CASTIGAR	cathedra <i>v.</i> DATHEDRALITOS
castil <i>v.</i> CASTILLEJO	cathedralitos <i>v.</i> DATHEDRALITOS
CASTILLA	cathre <i>v.</i> CAMA
CASTILLEJO	ÇATICO
CASTILLO (CASTILLEJO)	CATIVAR
castizo <i>v.</i> CASTA	CATOBLEPAS
CASTO	CATOLICO
CASTOR	CATOLICON
castradera <i>v.</i> CASTRADO	CATON
CASTRADO (CAPAR)	CATORZE
castrador <i>v.</i> CASTRADO	CATORZEÑO
castrapueras <i>v.</i> CASTRADO	CAVCION (FIADOR)
CASTRAR	caucionero <i>v.</i> CAVCION; FIADOR
CASTRENSE	CAVDAL (CAVALGAR)
CASTRO (ESCAQVE)	caudaloso <i>v.</i> CAVDAL
castron <i>v.</i> CASTRADO; CAPAR	CAVDILLO
CASVAL 1, s. CASO 2	CAVSA
CASVAL 2, s. CASTRO	CAVSA SEGVNDA. s. CAVALGAR
CASVLLA	CAVSAR
cata <i>v.</i> CATAR; HORCA; CALA 1	CAVSON 1
catadura <i>v.</i> CATAR	CAVSON 2, s. CAVSA SEGVNDA
CATALAN	CAVSTICO
CATALINA	causto <i>v.</i> CAVSTICO
Catalnica <i>v.</i> CATALINA	CAVTELA
CATALVÑA	cauteloso <i>v.</i> CAVTELA
CATANES	cauteria <i>v.</i> CAVSTICO
CATAPLASMO	CAVTERIO
CATAR	cauterizar <i>v.</i> CAVTERIO
ÇATARA	CAVTIVO 1, s. CATIVAR
cataracta <i>v.</i> CATARATA	CAVTIVO 2
CATARAÑA	CAVA (FOSO)
CATARATA	CAVA
CATARRO (DISTILATORIO)	CAVADOR

CAVADVRA
 CAVAL
 CAVALGADA
 cavalgador *v.* CAVALGAR
 CAVALGADVRA
 CAVALGAR
 CAVALLERATO
 CAVALLERIA (CAVALLERO)
 CAVALLERIZA
 CAVALLERIZO
 CAVALLERO (CAVALLO)
 CAVALLO (BORDON 1)
 CAVAÑA 1, *s.* CATORZE
 CAVAÑA 2, *s.* CAVERNOSO
 CAVAÑAS (CABAÑVELAS)
 CAVAÑVELAS (*cf.* CABAÑVELAS)
 CAVAR *s.* CAVA
 CAVASA *v.* GAVASA
 CAVERNA
 CAVERNOSO
 cavilacion *v.* CAVALGAR
 caviloso *v.* CAVALGAR
 CAXA
 CAXERO
 caxeta *v.* CAXON
 CAXON
 CAYADO (BACVLO)
 caydia *v.* CAIDA
 CAYMAN
 CAYREL
 CAYRELAR
 CAYRO
 CAZ *s.* CACAREAR
 CAZALLA
 (*Las voces que empiezan con ce-*
se encuentran después de cu-)
 CE
 cebada *v.* CEBO
 cebarse *v.* CEBO
 CEBELLINAS (MARTA)
 CEBO
 CEBOLLA

cebollar *v.* CEBOLLINO
 cebollera *v.* CEBOLLINO
 CEBOLLINO
 cebon *v.* CEBO
 CEBRA
 CEBRATANA
 CEBREROS
 CEBRINA
 CECA
 CECEAR (*c*)
 ceceoso *v.* CECEAR
 CECIAL (FRESCO; MERLVZA)
 CECILIA
 CECINA
 cecinado *v.* CECINA
 cecinar *v.* CECINA
 ceço *v.* CECEAR
 ced *v.* CERO 2
 cedacero *v.* CEDACILLO
 CEDACILLO
 CEDAZO
 CEDRO
 CEDVLA
 CEDVLONES
 CEGAJOSO
 CEGAR
 cegarritas *v.* CEGAJOSO
 CEGVEDAD
 CEGVERA
 CEGVTA
 CEJA
 CEJAR
 cejunto *v.* CEJA
 CELADA (EMBOSCARSE)
 CELAR (CELOSO)
 CELDA
 CELEBRAR
 celebre *v.* CELEBRAR
 celebridad *v.* CELEBRAR
 CELEBRO
 CELEMIN
 CELESTIAL

CELESTINA
 CELEVES *s.* CAXON
 CELIBATO
 CELIDONIA (GOLONDRINA)
 CELO
 CELOGIA (CANCEL)
 CELOSA 1, *s.* CELAR
 CELOSA 2, *s.* CELO
 CELOSO *s.* CELOSA 1
 CELTIBERIA
 CELTICI *s.* ALCVDIA
 CEMENTERIO
 CENA 1
 CENA 2, *s.* CENADOR
 CENACVLO
 CENADOR
 CENAGAL (CIENO)
 cenagoso *v.* CIENO
 CENCEÑO (LEVADVRA)
 cencerrear *v.* CENCERRO
 cencerrilla *v.* CENCERRO
 CENCERRO
 CENDAL
 cendolilla *v.* CENDAL
 CENDRA
 cendrado *v.* CENDRA
 CENID
 CENIZA
 cenizero *v.* CENIZIENTO
 CENIZIENTO
 CENOGIL (IARRETERA 1)
 CENOTAFIO
 censatorio *v.* CENSO
 CENSO
 CENSORES *s.* CEPHOS
 censual *v.* CENSO
 CENTAVRA
 CENTAVRO (CENTAVRA)
 CENTELLA
 centellear *v.* CENTELLA
 centena *v.* CIENTO
 centenar *v.* CIENTO

centenario *v.* CIENTO
 CENTENO
 CENTONES
 CENTRO
 CENTVRIA
 centurias *v.* ANALES
 ceñidor *v.* CEÑIR; CINTO
 CEÑIDOS *s.* CINTO
 CEÑIR 1, *s.* CENIZIENTO (CINTO)
 CEÑIR 2, *s.* CENTRO
 CEÑO 1, *s.* CEÑIR 1
 CEÑO 2, *s.* CEÑIR 2
 CEÑVDO (CEÑO)
 CEPA
 CEPHOS *s.* CELEVES
 CEPILLO
 CEPO 1, *s.* CEPHOS
 CEPO 2, *s.* CEPA
 CEQVI
 CERA
 CERAPEZ (ATANQVIA)
 CERBERO (CANCERVERO)
 CERCA 1, 2
 cercado *v.* CERCAR
 CERCAR
 CERCEN
 cercenadura *v.* CERCEN
 cercenar *v.* ACERCEN; CERCEN
 CERCETA
 CERCILLO
 cercio *v.* CIERÇO
 cerco *v.* CERCAR; CIRCVLO
 CERDA
 cerdanas *v.* ESCVELA
 CERDEÑA
 cerder *v.* CERNER
 cereço *v.* CEREZA
 cerimonia *v.* CEREMONIATICO
 CEREMONIATICO
 cereria *v.* CERA
 cerero *v.* CERA
 CERES

CEREZA
 CERIBONES
 CERIMONIA (*sic*)
 CERNADA 1, s. CERDA (CENIZA)
 CERNADA 2, s. CEREMONIATICO
 CERNADERO
 CERNEDERO (CERNADERO)
 CERNEJAS
 CERNER (CERNICALO)
 CERNICALO
 cernir *v.* CERNER
 CERO 1 s. CERES
 CERO 2
 CEROFERARIOS s. CIRIAL
 (CANDELA)
 CEROTE 1, s. CERO 1 (CAPATERA)
 CEROTE 2, s. CERO 2
 cerradero *v.* CERRAR
 cerradura *v.* CERRAR
 CERRAJAS (CERRAR)
 cerrajero *v.* CERRAR
 CERRALVO
 CERRALLE
 CERRAR
 CERRATO
 CERRION (CARAMBANO)
 CERRO
 certero *v.* CIERTO
 CERTIFICAR
 certificatoria *v.* CERTIFICAR
 cerusa *v.* ALVAYALDE
 CERVANTES
 CERVATILLO
 CERVEZA
 cerviguillo *v.* CERVIZ
 CERVIZ
 cervuno *v.* CIERVO
 CESAR
 cesarea *v.* CESAR
 CESARIANOS
 CESARINOS
 CESIS

cespitarío *v.* ESTROPIEÇO
 cessacion *v.* CESSAR
 CESSAR
 CESTA
 CESTO (CESTA; CORDERO;
 ESTVPRO)
 CETRERIA (ALCANDARA)
 CETRINO
 CETRO (ALCANDARA)
 CEVTI
 CEVADA
 CEVADERA
 CEVATA
 CEVIL
 CEVO
 CEXAR
 (*Las voces que empiezan con ci-*
se encuentran después de ce-
Véase arriba)
 CIAR
 ciatica *v.* CIAR
 CIBERA
 CICATRIZ
 CICIAL (CECIAL)
 Cicilia *v.* CICILIANO
 CICILIANO
 cicion *v.* CICIAL
 ciclan *v.* CICLOPES
 CICLOPES
 CIOVTA
 CID
 CIDRA
 cidro *v.* CIDRA
 CIEGO (CEGAR)
 CIELO
 CIENCIA
 CIENO
 CIENTO
 CIENTOPIES (ESCOLOPENDRA)
 ciercina *v.* CECINA
 CIERÇO
 cierne *v.* CERNER

CIERTO
 cierva *v.* CIERVO
 CIERVO (ESCOLOPENDRA)
 CIFRA
 CIFRAR
 CIGARRA
 CIGARRAL
 CIGATERA
 CIGOÑAL (GRVA)
 CIGVEÑA (CIGOÑAL)
 CILARO
 CILICIO
 CILINDRO
 CILLA
 cillerizo *v.* CILLA
 cillero *v.* CILLA
 CIMA
 CIMBORIO
 CIMBRAR
 cimbria *v.* CIMBRAR
 CIMENTERIO
 CIMERA
 CIMIENTO
 CIMITARRA
 CIMORRA
 CINAMOMO (CANELA)
 CINCEL 1
 CINCEL 2, *s.* CINCHA
 CINCO (LARGO)
 CINCHA
 cinchar *v.* CINCHA
 CINFONIA
 CINGARO (CONDE DE GITANOS;
 GITANO)
 CINGVLO
 CINICO
 cinnabro *v.* SANGRE DE DRAGO
 CINOSVRA
 CINTA
 cintero *v.* CEÑIR
 cintilante *v.* CENTELLA
 CINTILLO

CINTO (CEÑIR; CINGVLO; CINTA)
 cintoria *v.* CENTAVRA
 cintura *v.* CINTO
 CIPION (IVNCO)
 CIPRES
 CIRAT
 circaso *v.* MAMELVCOS
 CIRCO
 CIRCITO
 circular *v.* CIRCITO
 CIRCULO
 CIRCUNCIDAR
 circuncision *v.* CIRCUNCIDAR
 circunciso *v.* CIRCUNCIDAR
 CIRCUNFERENCIA
 CIRCUNSPECTO
 CIRCUNVEZINOS
 CIRIAL (CIRIO)
 CIRIO (CANDELA)
 CIRRO (CERRO)
 CIRVELA
 cirugia *v.* CIRVJANO
 CIRVJANO
 cis *v.* ÇAS
 CISCARSE
 CISCO
 CISMA
 cismático *v.* CISMA
 CISNE
 cistel *v.* CISTER
 CISTER
 cisterciense *v.* CISTER
 CISTERNA
 CITAR
 CITARA
 citatoria *v.* CITAR
 cithara *v.* CITARA
 CITO (EXE 2; HARRE)
 CITOLA
 CIUDAD
 CIUDAD REAL
 CIUDAD RODRIGO

CIVDADANO
 CIVIL
 CLAMAR (CLAMOR)
 CLAMOR
 clamo*rear v.* CLAMOR
 CLARA
 CLARABOYAS
 CLAREA (NIEVE)
 claridad *v.* CLARO
 clarificar *v.* CLARO
 CLARIN
 CLARO
 CLAROS
 CLASE
 clauquillador *v.* CLAVQVILLAR
 CLAVQVILLAR
 claustral *v.* CLAUSTRO 1
 CLAVSTRO 1, 2
 CLAVSVLA
 clausular *v.* CLAVSVLA
 CLAVSVRA
 CLAVA
 clavario *v.* CLAVERO
 CLAVE (COPVLA)
 CLAVEL (GVINDA)
 clavellina *v.* CLAVEL
 CLAVERO
 clavicimbalo *v.* CLAVICORDIO
 CLAVICORDIO *s.* CLAVIJO
 CLAVIJA
 CLAVIJO
 claviorgano *v.* CLAVICORDIO
 CLAVO 1, 2
 CLEMENCIA
 clemente *v.* CLEMENCIA
 CLEMENTINOS
 clerecia *v.* CLERIGO 2
 clerical *v.* CLERIZON
 clericato *v.* CLERIGO 1
 CLERIGO 1, 2
 CLERIZON
 CLIMA

CLIN
 clínico *v.* ARCHITRICLINOS;
 CIRVJANO
 clistel *v.* CRISTEL
 CLVECA (CVCLILLAS)
 clunada *v.* ANCA
 CLYSTEL (*cf.* CLISTEL)
 ço *v.* AÇOMAR
 coabitar *v.* ABITAR
 COADIVTOR
 COALLA
 COBARDE
 COBEGERA
 COBERTERA (CVBRIR)
 COBERTIZO (CVBRIR)
 COBERTOR
 COBIJA
 cobrador *v.* COBRAR
 cobrança *v.* COBRAR
 COBRAR
 COBRE
 cobro *v.* COBRAR
 COCA 1 (GVSANO; COCOTE)
 COCA 2
 ÇOCADOVER
 COCAR
 COCCO *v.* ALQVERME
 COCEAR
 COCENTAYNA
 COCES (DAR—) *s.* COCEAR
 cocimiento *v.* COZINA
 cocina *v.* COZINA
 COCINERO
 COCO 1, 2, 3 (COCA; COCAR;
 CARRASCA; CVCO; GRANO)
 ÇOÇOBRA
 çocodover *v.* ÇOCADOVER
 COCODRILO
 cocorron *v.* COCOTE
 cocoso *v.* GVSANO
 COCOTE
 cochambre *v.* COZER

COCHE
 COCHERA
 cochero *v.* COCHERA
 COCHINILLA (GRANA; COCO 2)
 COCHINO
 COCHITE (COZER)
 cochlea *v.* CARACOL
 cocho *v.* COZER
 COCHVRA
 codal *v.* CODO
 CODERA
 codicia *v.* CODICIAR; CVDICIA
 CODICIAR (CVDICIA)
 CODICILO
 codicioso *v.* CVDICIA
 CODIGO
 CODO
 CODON
 codoñate *v.* MEMBRILLO; CODON
 codoño *v.* MEMBRILLO
 CODORNIZ
 COFIA
 COFIN
 COFRADE (HERMANO)
 cofradia *v.* COFRADE
 COFRE
 COGER
 cogijo *v.* COSCOIA
 cogijoso *v.* COSCOIA
 COGOLLO
 COGOTE (COCOTE)
 cogujada *v.* ESMEREJON
 COGVLLA
 COGVXADA (ESMEREJON)
 COGVXON
 COHECHAR
 cohecho *v.* COHECHAR
 COHETE
 cohita *v.* CALLE
 COHOMBRILLO
 COHOMBRO
 coja *v.* COXO

COJON
 cojudo *v.* COJON
 COL
 COLA 1, 2, 3
 COLA DE CAVALLO *s.* COLA 1
 COLACION 1, 2, 3, 4
 COLADA
 coladero, -a *v.* COLAR
 COLAR (COLACION)
 COLATERAL
 colchar *v.* COLCHAS
 COLCHAS
 COLCHON
 colchonero *v.* COLCHON
 colecta *v.* COLETOR 1
 colecturia *v.* COLETOR 1
 colegial *v.* COLEGIO
 COLEGIO
 COLEGIR
 COLERA
 colerico *v.* COLERA
 COLETA (CABELLERA)
 COLETANEO
 COLETOR 1, 2
 COLGADIZO
 colgadura *v.* COLGAR 2
 colgajo *v.* COLGAR 1
 COLGAR 1, 2, *s.* COLETANEO
 COLGAR 3, *s.* COLGADIZO
 COLGAR 4, *s.* CVELLO
 COLIBRE
 COLICA
 coligir *v.* COLEGIR
 colino *v.* COL
 COLIRIO
 COLISEO
 COLMENA
 colmenar *v.* COLMENA
 colmenero *v.* COLMENA
 COLMILLO (DIENTE)
 COLMO
 COLODRA

COLODRILLO
 COLODRO
 COLON
 colon *v.* COLON
 COLONIA
 COLOQVINTIDA
 COLOR (SIRGVERO)
 COLOR BAÇA *s.* BAÇO (BAZO)
 COLORADO
 colorear *v.* COLORADO
 colorir *v.* COLORADO
 COLOSENSES
 COLOSO
 coltorto *v.* CVELLO
 COLVMBRAR
 COLVMELA
 COLVMNA
 COLVMPIO
 coluna *v.* COLVMNA
 COLVNAS DE HERCVLES *s.*
 COLVMNA
 COLVROS
 COLVSION
 COLLADO
 COLLAR (CVELLO)
 COLLAZO (COLETANEO)
 collera *v.* CVELLO
 COMA (COMMA)
 çoma *v.* ASSOMAR
 COMADRE (MADRINA)
 COMADREJA
 COMADRERO
 COMARCA
 comarcano *v.* MARCA 1;
 COMARCA
 COMBA
 combado *v.* COMBA
 ãombate *v.* COMBATIR
 combatiente *v.* COMBATIR
 COMBATIR (BATIR)
 COMBIDADO *s.* COMBITE
 COMBIDAR

COMBITE
 COMBLEZA (BRIZO)
 COMEDIA
 comediante *v.* COMEDIA
 COMEDIDO
 comedimiento *v.* COMEDIDO
 comedir-se *v.* COMEDIDO
 comedor *v.* COMER
 COMENÇAR
 COMENDADOR (ENCOMENDAR)
 comenias *v.* ALCOMENIAS
 COMENSAL
 COMER
 COMETA
 COMETER
 comico *v.* COMEDIA
 COMIDA
 comienço *v.* COMENÇAR
 COMIGO
 comilon *v.* COMER
 COMINO
 comissario *v.* COMETER
 comission *v.* COMETER
 COMITE
 COMITRE (COMITE)
 COMMA *s.* COMA
 COMO
 comocion *v.* COMOVER
 COMODO
 COMOVER
 COMPADECERSE
 COMPADRE (PADRINO)
 compañero *v.* COMPAÑIA
 COMPAÑIA 1, 2, 3
 COMPAÑON
 comparacion *v.* COMPARAR
 COMPARAR
 compartimiento *v.* COMPARTIR
 COMPARTIR
 COMPAS
 COMPASAR
 compatriota *v.* PATRIA

COMPELER
 compelido *v.* COMPELER
 COMPENDIO
 compendioso *v.* COMPENDIO
 compensable *v.* COMPENSAR
 compensacion *v.* COMPENSAR
 COMPENSAR
 competencia *v.* COMPENSAR
 competente *v.* COMPETER
 COMPETER
 competidor *v.* COMPENSAR
 competir *v.* COMPENSAR
 complacencia *v.* COMPLACER
 COMPLACER
 COMPLEXION
 componedor *v.* COMPONER
 COMPONER
 composicion *v.* COMPONER
 COMPOSTELA
 compostura *v.* COMPONER
 COMPRAR
 COMPREHENDER
 comprehensor *v.* COMPRE-
 HENDER
 comprobacion *v.* COMPROBAR
 COMPROBAR
 COMPROMETER
 compromiso *v.* COMPROMETER
 comprobar *v.* PROVAR
 COMPVERTA
 COMPVLSAR
 compulsoria *v.* COMPVLSAR
 COMPVNGIR
 computador *v.* CONTADOR 2
 COMVLGAR
 COMVN
 comunicable *v.* COMVNICAR
 comunicacion *v.* COMVNICAR
 COMVNICAR
 COMVNIDAD
 COMVNION
 CON

concavidad *v.* CONCAVO
 CONCAVO
 CONCEBIR
 CONCEDER
 concegil *v.* CONCEJO
 CONCEJO
 CONCEPTO
 CONCERTAR
 concesion *v.* CONCEDER
 CONCIENCIA
 conciençudo *v.* CONCIENCIA
 concierto *v.* CONCERTAR
 conciliabulo *v.* CONCILIO
 conciliador *v.* CONCILIAR
 CONCILIAR
 CONCILIO
 CONCLAVE
 conclavista *v.* CONCLAVE
 CONCLVIR
 CONCLVSION
 concluyente *v.* CONCLVSION
 concordancia *v.* CONCORDAR
 CONCORDAR
 CONCORDES
 CONCVBINA
 concubinario *v.* CONCVBINA
 CONCVRRIR
 concurso *v.* CONCVRRIR
 CONCHA
 CONCHAVANÇA
 condado *v.* CONDE
 CONDE
 CONDE DE GITANOS *s.* CONDES-
 TABLE
 CONDE PALATINO *s.* CONDE
 condenacion *v.* CONDENAR
 CONDENAR
 condesar *v.* CONDEXAR
 condesixo *v.* CONDEXAR
 CONDESTABLE
 CONDEXAR
 CONDICION

condicional *v.* CONDICION
 CONDIMENTO
 CONDOLERSE (*DOLERSE*)
 CONDVCHO
 CONDVMIQ
 CONDVTA
 conduto *v.* CANAL 2
 conejal *v.* CONEJO
 conejera *v.* CONEJO
 CONEJO
 confederacion *v.* CONFEDERAR
 CONFEDERAR
 CONFERENCIA
 CONFERIR
 confessante *v.* CONFESSAR
 CONFESSAR
 confession *v.* CONFESSAR
 CONFESSO
 confianza *v.* CONFIAR
 CONFIAR
 confinar *v.* FINO
 confirmacion *v.* CONFIRMAR
 CONFIRMAR (*FIRMA*)
 confiscacion *v.* FISCO
 CONFISCAR (*FISCO*)
 confitar *v.* CONFITE
 CONFITE
 confitera *v.* CONFITE
 confiteria *v.* CONFITE
 confitero *v.* CONFITE
 confitura *v.* CONFITE
 CONFLITO
 CONFORMAR (*FORMAR*)
 conforme *v.* FORMAR
 CONFORTAR
 confortativo *v.* CONFORTAR
 confrontarse *v.* FRENTE
 CONFVNDIR
 confusion *v.* CONFVNDIR
 confuso *v.* CONFVNDIR
 CONFVTAR
 CONGELAR (*ELAR*)

congio *v.* ESCANCIAR
 CONGOXA
 congoxarse *v.* CONGOXA
 congoxoso *v.* CONGOXA
 CONGRACIARSE
 congrete *v.* CONGRIO
 CONGRIO
 CONGRVENCIA
 CONJETVRA
 conjuracion *v.* CONJVRAR 1
 CONJVRAMENTAR
 CONJVRAR 1, 2
 conllevar *v.* LLEVAR
 conmigo *v.* COMIGO
 connexidad *v.* ANEXO
 CONNVSCO
 conocencia *v.* CONOCIMIENTO
 CONOCER
 CONOCIDO
 CONOCIMIENTO
 CONORTAR
 CONQVISTAR
 consagracion *v.* CONSAGRAR
 consagrante *v.* CONSAGRAR
 CONSAGRAR
 CONSANGVINIDAD
 consecucion *v.* CONSEGVIR
 consecutivamente *v.* CONSEGVIR
 CONSEGVIR
 CONSEIO DE CAMARA S. CAMAR-
 LENGQ
 CONSEJA
 CONSEJEROS
 CONSEJO
 consentimiento *v.* CONSENTIR
 CONSENTIR
 consecuencia *v.* CONSEGVIR
 CONSERVA
 conservacion *v.* CONSERVA
 CONSERVAR (*CONSERVA*)
 CONSERVATORIAS
 conservera *v.* CONSERVA

CONSIDERAR
 CONSIGO
 CONSILARIO
 consintiente *v.* CONSENTIR
 consolacion *v.* CONSOLAR
 consolador *v.* CONSOLAR
 CONSOLAR
 CONSONAR
 conspicillia *v.* ANTOJOS
 conspiracion *v.* ESPIRITVAL
 CONSPIRAR (ESPIRITVAL)
 CONSTANCIA
 constante *v.* CONSTAR
 CONSTANTINA
 CONSTANTINOPLA
 constantinopolitano *v.*
 CONSTANTINOPLA
 CONSTAR
 CONSTELACION
 constitucion *v.* CONSTITUYENTE
 CONSTITVIR
 CONSTITVYDO
 CONSTITVYENTE
 CONSVEGRAR
 CONSVEGRAS
 CONSVEGRO
 CONSVELO (CONSOLAR)
 CONSVL
 consulado *v.* CONSVL
 consultante *v.* CONSVLTAR
 CONSVLTAR
 consultor *v.* CONSVLTAR
 CONSUMADO
 consumir *v.* CONSUMADO
 consumido *v.* CONSUMIR 1
 CONSUMIR 1, 2
 CONSVNO
 CONTACTO
 CONTADOR 1, 2
 CONTAGION
 CONTAGIOSO
 CONTAMINAR

CONTAR
 contemplacion *v.* CONTEMPLAR
 CONTEMPLAR
 contemplativo *v.* CONTEMPLAR
 contencioso *v.* CONTENDER
 CONTENDER
 contendor *v.* CONTENDER
 CONTENERSE
 contentamiento *v.* CONTENTARSE
 CONTENTARSE
 CONTENTO (CONTENTARSE)
 CONTERA
 contestar *v.* CONTESTES
 CONTESTES
 contienda *v.* CONTENDER
 contienenete *v.* CONTENERSE
 CONTIGO
 continencia *v.* CONTENERSE
 CONTINENTE
 contino *v.* CONTINVAR
 CONTINVAR
 continuo *v.* CONTINVAR
 CONTRA
 CONTRABAJO
 CONTRACEDVLA
 CONTRADECIR
 contradicion *v.* CONTRADECIR
 CONTRADITAS
 contraditor *v.* CONTRADECIR
 contradictorio *v.* CONTRADECIR
 CONTRAFOSO
 CONTRAHAZER
 contrahecho *v.* CONTRAHAZER
 CONTRAHER *s.* CONTRAVENIR
 CONTRALOR *s.* CONTRATACION
 CONTRAMINA (MINA)
 contraminar *v.* CONTRAMINA
 CONTRAPAS
 CONTRAPASSAR
 CONTRAPESAR
 CONTRAPESO
 CONTRAPONER

CONTRARIO	copista <i>v.</i> COPIA
CONTRASEÑA	COPLA
CONTRASTAR	COPLAS
CONTRASTES	COPO
CONTRATACION	ÇOPO
contrato <i>v.</i> CONTRAHER	COPON
CONTRAVANDO	COPVLA
CONTRAVENIR	CORAÇON
contrecho <i>v.</i> CONTRAHIZER	CORADA (ASSADVRA)
contribucion <i>v.</i> CONTRIBVIR	CORAJE
CONTRIBVIR	corajudo <i>v.</i> CORAJE
CONTRICION	CORAL
CONTVMMAZ	CORAZA (LORICA)
CONTVMELIA	CORAZNADA
contumelioso <i>v.</i> CONTVMELIA	CORCEGA
CONTVRBAR	corço <i>v.</i> CORZO
CONVALECENCIA	CORCOBA
CONVALECER	CORCOBADO
convaleciente <i>v.</i> CONVALECENCIA	corcobo <i>v.</i> CORCOBADO
CONVENCER	CORCHEA
convenible <i>v.</i> CONVENIR	CORCHETE (ESBIRRO)
conveniencia <i>v.</i> CONVENIR	CORCHO
conveniente <i>v.</i> CONVENIR	CORDEL
CONVENIR	cordelejo <i>v.</i> CORDEL
CONVENTICVLO	CORDELLATE
CONVENTO	CORDERO
conventuales <i>v.</i> CONVENTO	corderuna <i>v.</i> CORDERO
conversable <i>v.</i> CONVERSAR	CORDIAL
conversacion <i>v.</i> CONVERSAR	CORDILLERA
CONVERSAR	CORDOJO
conversion <i>v.</i> CONVERTIR	CORDON
convertible <i>v.</i> CONVERTIR	cordonero <i>v.</i> CORDON
convertida <i>v.</i> CONVERTIR	CORDOVA
CONVERTIR	CORDOVAN (CVERO)
convexo <i>v.</i> CONCAVO	CORDVRA
CONVVSCO	CORIA
COPA (BASTON 3; COPILLA)	CORISTA
còpero, -a <i>v.</i> COPON	ÇORITA 1, 2
COPETE (BONETE)	CORITO
COPIA (ARCHETYP0; DECHADO)	CORMA (FVGITIVO; CEPO)
COPILLA	CORNADO
copioso <i>v.</i> COPIA	CORNAMVSA

CORNEJA
 CORNERINA
 CORNETA
 CORNICABRA (CVERNO)
 CORNICVLARIO (CVERNO)
 CORNIJA
 cornijal *v.* CVERNO
 CORNVDO (ACORRVCARSE;
 CABRON)
 cornupeta *v.* CVERNO
 CORO (DECORAR 2)
 COROÇA
 CORONA 1, 2 (GORRA; GRAMA;
 DIADEMA)
 coronacion *v.* CORONA 2
 coronado *v.* CORONA 2
 coronario *v.* CORONA 2
 coronel *v.* DIADEMA
 CORONICA
 coronilla *v.* CORONA 1
 CORONISTA
 COROZA *v.* MITRA
 CORPORAL
 corporeo *v.* CORPORAL
 çorra *v.* ÇVRRADOR
 corragero *v.* CVERO
 CORRAL 1, 2
 CORREA
 correcto *v.* CORREGIR
 corrector *v.* CORREGIR
 CORREDERA
 CORREDOR
 corregeria *v.* ÇACATIN
 corregidor *v.* CORREGIR;
 GOVERNAR 1
 corregimiento *v.* CORREGIR
 CORREGIR
 correncia *v.* CAGAR
 correo *v.* CORREDOR; POSTAS
 correoso *v.* CORREA
 CORRER
 çorrera *v.* ÇVRRADOR

çorreria *v.* ÇVRRADOR
 CORRERIAS
 çorrero *v.* SORRA
 correspondencia *v.* CORREGIR
 corresponsal *v.* CORREGIR
 corretor *v.* CORREGIR
 corriente *v.* CORRERIAS
 corrillo *v.* CORRO
 corrimiento *v.* CORRER
 CORRO
 CORROMPER
 Corruo *v.* ACORRVCARSE
 corrupcion *v.* CORROMPER
 corrupta *v.* CORROMPER
 CORRVPTELA
 corsario *v.* CORSO
 CORSO (CVRSO)
 CORTA COSA *s.* CORTEZA
 CORTABOLSAS
 cortador *v.* ÇORTAR
 cortadura *v.* CORTABOLSAS
 cortapisa *v.* CORTABOLSAS
 CORTAR
 CORTE 1, 2 (EMPLAZAR;
 FABRICA)
 cortedad *v.* CORTA COSA
 CORTES (CORTE)
 cortesana *v.* CORTE 2
 cortesania *v.* CORTE 2
 cortesano *v.* CORTE 2
 CORTEZA *s.* CORTINAL
 cortezon *v.* CORTEZA
 cortijo *v.* CORTINAL
 CORTINA
 cortinaje *v.* CORTINA
 CORTINAL
 corto *v.* CORTA CÔSA
 coruas *v.* MANTA 2
 CORVA
 corvadura *v.* CORVA
 corvejon *v.* CORVA
 corveta *v.* CORVA

corvillo <i>v.</i> CORVA	COTEJAR
CORVINA	cotejo <i>v.</i> COTEJAR
CORYBANTES <i>s.</i> CORYPHEO	COTIDIANO
CORYPHEO <i>s.</i> CORIA	COTIN
CORZO	COTO 1, 2, 3
COSA	coton <i>v.</i> CODON
COSARIO (CORSO; POSTAS)	COTONIA
COSCOGITA	coturno <i>v.</i> ÇVECO
COSCOIA (<i>cf.</i> COSCOXA)	COVACHA
coscoja, -o, <i>v.</i> COSCOIA; COCO 2;	covanillo <i>v.</i> CVEZO
GRANA	covina <i>v.</i> CORVINA
COSCORRON	coxear <i>v.</i> COXO; COXQVEAR
COSCOXA, -o <i>v.</i> GRANA; CARRASCA	COXIJO
COSECHA	coxijoso <i>v.</i> COXIJO
COSELETE	COXIN
COŞER	COXITRANCA
cosi cosa <i>v.</i> GRIFO; CABER; COSA	COXO (COXITRANCA)
COSME	COXON
COSMOGRAFO	COXQVEAR
COSMOGRAPHIA	COYVNDÁ <i>s.</i> COHOMBRILLO
COSO	COYVNTVRA <i>s.</i> CÔYVNDÁ
COSQVILLAS	COZ 1, 2 (COCEADOR)
cosquilloso <i>v.</i> COSQVILLAS	COZER
COSTA 1, 2	COZINA 1, <i>s.</i> CONCENTAYNA
COSTADO	COZINA 2, <i>s.</i> COZER
costal <i>v.</i> COSTILLA	CRECER
costanero <i>v.</i> CVESTA	CRECIDO
coste <i>v.</i> COSTA 1	creciente <i>v.</i> CRECIDO
costear <i>v.</i> COSTA 1	crecimiento <i>v.</i> CRECIDO
COSTERO (CVESTA)	credencia <i>v.</i> APARADOR; VASAR;
COSTILLA	CRECIDO
COSTILLER	credenciero <i>v.</i> CRECIDO
costoso <i>v.</i> COSTA 1	CREDITO
COSTRA	CREER
COSTRADA (CIDRA)	cremor <i>v.</i> ALMIDON
COSTREÑIR	crencha <i>v.</i> CRENCHE
COSTVMBRE	CRENCHE
COSTVRA (COSER)	CREPVSCVLO
costurera <i>v.</i> COSER	CRESPO
costuron <i>v.</i> COSTVRA	CRESTA
COTA 1, 2, 3	CRETA
COTAL	CRÍA 1, 2

criada <i>v.</i> CRIADO	cubeto <i>v.</i> CVBA
CRIADILLAS 1, 2 (TVFO; TVRMAS)	CVBIA (AÇVDA)
CRiado <i>s.</i> CRIADOR	cubierto <i>v.</i> CVBRIR
CRiADOR <i>s.</i> CRIATVRA	CVBILETE <i>s.</i> CVBO (IVEGO 2)
CRianza (CRIADO)	CVBO
CRiAR 1, 2	çubre <i>v.</i> ALCREVITE
CRIATVRA 1, 2, 3, 4 (HECHVRA)	CVBRIR (GORRA)
CRIMEN 1, 2	cubuxada <i>v.</i> ALCOTAN
CRIMINAL	CVCA (GVSANO; CHVFA)
criminoso <i>v.</i> CRIMINAL	CVCARACHA
CRIN (CLIN)	CVCARRO
CRISMA	CVCLILLAS 1, <i>s.</i> CLVECA
crismar <i>v.</i> CRISMA	CVCLILLAS 2, <i>s.</i> CVCHILLO
crismera <i>v.</i> CRISMA	CVCLILLO (CORNVDO)
CRISOL	CVCO
CRISOLITO	cuculos <i>v.</i> CAPILLA 1
CRISTAL (VIDRIO)	cuculla <i>v.</i> CAPILLA 1
crystalino <i>v.</i> CRISTAL	cucullo <i>v.</i> COROÇA
CRISTEL (<i>cf.</i> CLISTEL)	cucullucho <i>v.</i> COROÇA
CRITICO	cuçurra <i>v.</i> CAÇVRRAS
CRIVA	CVCHAR (CVCHARRON)
CRIVO	euchara <i>v.</i> CVCHAR
CROCODILO (COCODRILO)	CVCHARADA
CROMATICO	CVCHARRON
CRÓNOGRAFIA	euchilla <i>v.</i> CVCHILLO
crucifero <i>v.</i> CRVZERO	euchillada <i>v.</i> CVCHILLO
crucifixo <i>v.</i> FIJAR; CRVZIFIXO	euchillero <i>v.</i> CVCHILLO
CRVDEZAS	CVCHILLO
crudio <i>v.</i> CRVDEZAS	CVDICIA
CRVDO 1, 2 (CRVDEZAS)	eudicioso <i>v.</i> CODICIAR
CRVEL	ÇVECO (ALCORQVE)
CRVELDAD	CVELLAR
CRVGIA	euellierguido <i>v.</i> CVELLO; EREGIR
CRVGIR	CVELLO
CRVZ	CVENCA 1
cruzado, -a <i>v.</i> CRVZIFIXO	CVENCA 2, (CONCHA)
cruzar <i>v.</i> CRVZERO	CVENDA (MADEXA)
CRVZERO	CVENTA 1, <i>s.</i> CVENTO
CRVZIFIXO	CVENTA 2, <i>s.</i> CVENDA
cu cu <i>v.</i> CORNVDO	CVENTO <i>s.</i> CONTAR
CVBA	cuera <i>v.</i> CVERO
cubeta <i>v.</i> CVBA	cuera de ante, <i>v.</i> ANTE; BVFALO

CVERDA 1, 2
 cuerdo *v.* CORDVRA; CVERDA 2
 CVERNO (ALCVZA; ARROLLAR;
 CORNVDO)
 CVERO
 CVERPO
 CVERVA
 CVERVO
 CVESTA
 CVEVA
 CDEVANO
 CVEZO
 çufrible *v.* SVFRIR
 çufrimiento *v.* SVFRIR
 cugulla *v.* CAPILLA 1; COROÇA
 CVIDAR
 CVITA
 cuitado *v.* CVITA
 CVLANTRILLO (BRENCA)
 CVLANTRO
 CVLATA
 CVLEBRA
 CVLEBRILLA
 CVLEBRINA (ARCABVZ)
 culina *v.* FAMILIAR
 CVLPA
 CVLTIVAR
 CVLTO
 ÇVMAQVE
 ÇVMAYA
 CVMBRE
 ÇVMILLO
 ÇVMO
 çumoso *v.* ÇVMO
 cumplimiento *v.* CVMPLIR
 CVMPLIR
 CVNA
 çVNDIR
 cuneo *v.* CVÑA
 CVÑA
 cuñada *v.* CVÑADO
 CVÑADO

cuño *v.* CVÑA
 CVRA
 çura *v.* ÇORITA
 curable *v.* CVRAR
 curadillo *v.* CVRAR
 CVRALLE
 çurana *v.* ÇORITA
 CVRAR
 curato *v.* CVRA
 çurcidera *v.* SVRZIR
 çurcidor *v.* ÇVRCIR
 çurcadura *v.* ÇVRCIR
 ÇVRCIR
 ÇVRDO (EZQVERRA)
 CVREÑA
 CVRIA
 curial *v.* CVRIA
 curiosidad *v.* CVRIOSO
 CVRIOSO
 ÇVRA
 ÇVRRADOR
 ÇVRRANA
 çurrapa *v.* ÇVRRARSE
 ÇVRRARSE
 ÇVRRIAGA
 çurron *v.* ÇVRRARSE
 cursar *v.* CVRSO
 cursario *v.* COSARIO
 cursillo *v.* CVRSO
 CVRSO
 cursor *v.* CVRSO
 curtago *v.* HACA; FACA
 curtidor *v.* CVRTIR 1
 CVRTIR 1
 CVRTIR 2, *err. por* CVTIR
 curucho *v.* COROÇA
 çutanillo *v.* ÇVTANO
 ÇVTANO
 CVTIO
 cutir *v.* CVRTIR 2
 cuxa *v.* COXIN
 cuxo *v.* COXIN

çuyzo, -a, *v.* CHVZON

CVZCO

ÇVZIO

Ch

CHAÇA

CHACOTA

CHAFALLO

CHAMARRA (ÇAMARRO)

CHAMELOTE (CAMELOTE)

chamorra *v.* GORRA; ÇAMORRA

CHAMORRAR (ÇAMARRO)

chamorro *v.* CHAMORRAR

CHAMVSCAR

chamusquina *v.* CHAMVSCAR

CHANCILLER (CANCILLER)

CHANCILLERIA (CANCEL)

CHANCLETAS (ÇANCO)

CHANÇONETA (CANTAR)

chancha *v.* CHARLATANchantre *v.* CAPISCOLchantria *v.* CAPISCOLIA

CHAPA

chapar *v.* CHAPAchapear *v.* CHAPAchapelo *v.* CAPELO 1

CHAPEO (CAPELO)

CHAPERIA *v.* CHAPAchaperon *v.* CHAPEO

CHAPIN

chapinaço *v.* CHAPINchapiron *v.* CHAPEO; CAPIROTE

CHAPITEL

chapucero *v.* CHAPAcharacter *v.* CARATER

CHARCO

charlar *v.* CHARLATAN

CHARLATAN

charquillo *v.* CHARCOchata *v.* CHATON

CHATON (TACHON)

CHAVACANO

CHAVES

CHELVA

cheras *v.* LAMPARON

CHERRION

cherub *v.* CHERVBINCHERVBIN *s.* CHIRRIARchia *v.* BECA; HIGOchibital *v.* CHIVO 1chibitero *v.* CHIVO 1CHICO *s.* CHICHONCHICORIA *s.* CHICO

(CAMAROA)

CHICHA

CHICHARRA (CIGARRA)

chicharron *v.* CHICHA

CHICHON

chifla *v.* ESPADILLA; CHIFLAR

CHIFLAR

chiflido *v.* CHIFLAR

CHILIADAS

CHILINDRON

chilo *v.* DIGERIR

CHILLA

CHILLAR

chillido *v.* CHILLARchillon *v.* CHILLA

CHIMENEA

CHIMERA

CHINA

CHINA

CHINCILLA

CHINCHE

chinchorreria *v.* CHINCORREROCHINCHORRERO *s.* CHINCILLA

CHINELA

CHIPIONA

CHIRIMIA

CHIRIVIA

CHIRON (ÇVRIAGA)

chironeo *v.* CHIRONCHIRRIAR *s.* CHIVO 1

CHIRRICHOTE

chirrión *v.* CHERRION

chirugia *v.* CHIRON
 chirujano *v.* CHIRON
 CHISME
 chismeria *v.* CHISME
 chismoso *v.* CHISME
 CHISPA
 CHISTAR *s.* CHITA
 CHISTE
 CHITA
 CHITON
 chivetero *v.* CABRITO; CHIVO 2
 CHIVO 1, *s.* CHERRION (CABRITO)
 CHIVO 2
 chiz *v.* CHINCHE
 choa *v.* GRAJO
 CHOÇA
 chocar *v.* CHOQVE
 CHOCARRERO
 CHOCLAR
 CHOCLON
 CHOCHO
 CHOPO
 CHOQVE
 choqueguela *v.* CHVECA
 chorrear *v.* CHORRO
 CHORRO
 chotar *v.* CHOTO
 CHOTO (TOCHO)
 chria *v.* CRIA 1
 CHRISTIANAR *s.* CHRISTIANO
 CHRISTIANISMO *s.* CHRISTIANAR
 CHRISTIANISSIMO *s.* CHRISTIA-
 NISMO
 CHRISTIANO *s.* CHRISTO 1
 CHRISTIANO VIEJO *s.* CHRISTIA-
 NISSIMO
 CHRISTO 1, *s.* CRISMA
 CHRISTO 2
 chromatico *v.* CROMATICO
 CHRONICA
 chronografia *v.* CRONOGRAFIA
 chrysocola *v.* ATINCAR

chucero *v.* CHVCHO
 chuçon *v.* ZVYÇA
 chucheria *v.* CHVCHO
 CHVCHO
 CHVECA (PELOTA)
 CHVFA (CVCA)
 CHVFETA
 CHVLLA
 CHVPAR
 CHVRIZO
 CHVRRE
 CHVRVMBELA
 CHVSMA
 CHVZON

D

D
 DAÇA
 DACIA
 DACIO
 dactilo *v.* DATIL
 DADIVA (DAR)
 dadivoso *v.* DAR
 DADO
 dador *v.* DAR
 DAGA
 DAGES
 DAIFA
 DAIMEL
 DALMACIA
 DALMATICA
 DALLE
 DAMA
 DAMASCENAS
 damasco *v.* DAMA
 DAMASQVINO
 damera *v.* DAMA
 DANÇA (CORCOBA)
 DANÇA DE ESPADAS
 dança Pirricha *v.* BOLTEAR
 dañador *v.* DAÑO
 dañar (se) *v.* DAÑO

dañino *v.* DAÑO

DAÑO

dañoso *v.* DAÑO

DAPHNE

DAR

DARAGONTIA

DARAZVTAN

DARDANO

dardillo *v.* DARDO

DARDO

DARIO

DAROCA

DARRO

data *v.* FECHADATHEDRALITIOS (*err. por* CATHEDRALITIOS) *s.* CATEDRATICO

DATIL

dato de perro *v.* CANINAdaxza *v.* DAÇA

DE

DE AQVI ADELANTE

dean *v.* DECANOdeanato *v.* DECANO

DEBALDE

DEBATE (BATIR 1)

DEBATIR (BATIR 1)

DEBAXO

DEBIL

debilidad *v.* DEBILdebilitado *v.* DEBILdeble *v.* TREFE

DE BRVZOS

DECADAS (ANALES)

decanato *v.* DECANO

DECANO

decena *v.* DEZENOdecencia *v.* DECENTEdecendencia *v.* DECENDER

DECENDER

decendiente *v.* DECENDERdecendimiento *v.* DECENDER

DECENSO

DECENTAR (ENCENTAR)

DECENTE

DECERNIR

DECIR (DICHOSO)

DECISION

DECLAMAR

DECLARACION

declarante *v.* DECLARACION

DECLARAR

declinable *v.* DECLINAR

DECLINAR

DECORAR 1, 2 (TOMAR)

DECRETO

decretorio *v.* CRITICO

DECVRION

DECHADO (MVESTRA)

DEDAL

DEDALO

dedicacion *v.* DEDICAR

DEDICAR

DEDO (CODO)

deesa *v.* DEHESA

DEFALCAR (FALCAR)

DEFENDER

defesa *v.* DEHESA

DEFETO

defetuoso *v.* DEFETO

DEFORME

deformidad *v.* DEFORME

DEFVNTO

DEGENERAR

degollada *v.* DANÇA DE ESPADAS;

DEGOLLAR

DEGOLLAR

DEGRADAR

DEHESA

dehesero *v.* DEHESA

DEIANIRA

DEIDAD

dejarretar *v.* DESJARRETAR

DEL

DELANTAL
 DELANTE
 DELANTERA
 delantero *v.* DELANTERA
 DELATAR
 DELATE
 DELEGADO
 DELEGAR
 deleitable *v.* DELEITE
 deleitar(*se*) *v.* DELEITE
 DELEITE
 deleitoso *v.* DELEITE
 DELETREAR (LETRA)
 DELEZNABLE
 DELFIN
 delfinato *v.* DELFIN
 DELIA
 deliberacion *v.* DELIBERAR
 DELIBERAR
 DELICADO
 DELICIAS
 delicioso *v.* DELICIAS
 delincente *v.* DELITO
 delinquir *v.* DELITO
 DELIRAR
 delirio *v.* DELIRAR
 DELITO
 DELOS
 DEMANDA
 DEMANDAR
 DEMARCACION
 DEMAS
 DEMASIA
 DEMASIADO
 DEMEDIAR
 DEMOCRACIA
 democratia *v.* ARISTOCRATIA
 DEMOCRITO
 DEMOLER *s.* DESMOCHAR
 demoniaco *v.* DEMONIO
 DEMONIO
 DEMOSTENES

demostracion *v.* DEMOSTRAR
 DEMOSTRAR
 demudacion *v.* DEMVDAR
 DEMVDAR
 DENARIO 1, 2
 DENEGAR
 denegrado *v.* NEGRA
 DENIA
 denodado *v.* DENVEDO
 DENOSTAR *s.* DENTERA
 (HONESTO)
 DENSO
 dentadura *v.* DENTELLADAS
 DENTAL *s.* DENVEDO
 DENTELLADAS *s.* DIENTE
 DENTERA (DENTELLADAS)
 DENTON
 DENTRO
 DENVEDO
 denuesto *v.* DENOSTAR; HONESTO
 DENVNCIAR
 DEÑARSE
 DEPARTIR
 DEPONER (DEPVESTO)
 deposicion *v.* DEPONER
 DEPOSITAR
 DEPOSITARIO
 DEPOSITO
 depravacion *v.* DEPRAVAR
 DEPRAVAR
 DEPVESTO
 derechero *v.* DERECHO
 DERECHO
 derechura *v.* DERECHO
 DERIVAR
 derivativos *v.* DERIVAR
 DEROGAR
 DERRABAR
 derramamiento *v.* DERRAMAR
 DERRAMAR
 DERRAMAS
 DERRENGAR 1

DERRENGAR 2, s. RENQVEAR

DERRETIR

DERRETIRSE

DERRIBAR

DERROCAR (ROQVE)

DERROTA

DES—

desabahado *v.* BAHO

desabahamiento *v.* DESABAHAR

DESABAHAR (BAHO)

DESABEZAR

DESABOLLAR

desabotonar *v.* ABOTONARSE

DESABRIDO (SABIO)

DESABRIGAR

desabrimiento *v.* DESABRIDO;

DESABRIRSE

desabrir *v.* DESABRIDO

DESABRIRSE s. DESTRONCAR

desabrochar *v.* BROCA

DESACATAR (ACATAR; CATAR)

desacato *v.* ACATAR

DESACOMODAR

desacomodarse *v.* COMODO

desacompañamiento *v.* DESA-

COMPAÑAR

DESACOMPAÑAR

DESACOSTUMBRARSE

DESAFIAR

desafío *v.* DESAFIAR

desaforado *v.* DESAFVERO;

FVERO

DESAFVERO (FVERO)

desafuziar *v.* FVZIA (*cf.* DESAHV-
CIAR)

DESAGRADAR

DESAGRADECER

DESAGRADO

desagraviar(se) *v.* GRAVE

desaguadero *v.* AGVAR

desaguar *v.* AGVAR

DESAGVISADO (GVISADO;
AGVISADO)

DESAHVCIAR (FIVCIA)

DESAIRADO

DESALABRAR

desalado *v.* ALA

DESALAR s. DESABRIRSE

DESALARSE

DESALFORJADO (ALFORIA)

DESALFORJAR

desaliñado *v.* ALIÑAR

DESALIÑAR

desaliño *v.* DESALIÑAR; ALIÑAR

DESALMADO (ALMA)

DESALVARDAR

DESAMAR

desamor *v.* DESAMAR

desamorado *v.* DESAMAR

desamparados *v.* AMPARAR

DESAMPARAR (AMPARAR)

DESANDAR

DESANGRAR

desanimar *v.* ANIMAL

DESAÑVDAR

DESAPERCIBIDO

DESAPIADADO

DESAPRISIONAR

DESAPROVECHADO (PROVECHO;
APROVECHAR)

DESAPVNTAR (DEPVNTAR 2)

DESARMAR

DESARRAIGAR (ARRAYGAR)

DESARRAPADO

desarrimarse *v.* ARRIMAR

desarropar *v.* ARROPARSE

desaseado *v.* ASEO

DESASIR

DESASTRADO (ASTROSO)

DESASTRE

desatacar *v.* ATACAR

DESATAPAR

desataviado *v.* ATAVIAR
 desatentado *v.* TIENTO 1
 desatinado *v.* ATINAR
 DESATINAR
 desatino *v.* ATINAR
 desauciar *v.* FIVCIA; DESAHVCIAR
 DESAVENIRSE
 DESAVITVAR *s.* DESABEZAR
 DESAYVDAR (AYVDA)
 desayunarse *v.* AYVNO
 desbabar *v.* BABA
 desbalixar *v.* BALIXA
 desbarahustar *v.* BARAHVSTE
 DESBARATAR
 DESBARBADO
 DESBARRAR (BARRA)
 DESBASTAR (BASTA)
 DESBOCADO (BOCA)
 desbonetado *v.* BONETE
 DESBVCHAR
 DESCABEÇAR (CABEZON)
 DESCABELLADO
 DESCABVLLIRSE
 descaderado *v.* CADERA
 descaecer *v.* CAIDA
 descaecimiento *v.* CAIDA
 descalabradura *v.* DESCALABRAR
 DESCALABRAR (CALABRIADA)
 descalçar *v.* CALÇADOR
 DESCALÇO 1, *s.* CALÇADOR
 DESCALÇO 2 (ÇAPATO)
 descalverar *v.* DESCALABRAR
 descaminado *v.* CAMINO
 DESCAMINAR
 DESCANSAR (CANSADO)
 descanso *v.* DESCANSAR;
 CANSADO
 descanterar *v.* CANTON
 descantillar *v.* CANTON
 DESCAPILLAR
 descarado *v.* DESCARARSE

DESCARARSE (CARA 3)
 descargadero *v.* DESCARGAR
 DESCARGAR (CARGO)
 descargo *v.* DESCARGAR; CARGO
 DESCARNAR
 DESCARRIADO
 descarriar *v.* DESCARRIADO
 DESCARRILLAR (CARRILLO)
 DESCARTARSE *v.* CARTA
 descarte *v.* CARTA
 DESCASAR
 DESCASCAR
 DESCAVALGAR
 descendir *v.* DECENDER
 DESCEÑIR (CEÑIR)
 descercador *v.* DESCERCAR
 DESCERCAR (CERCAR)
 DESCERRAJAR
 descervigado *v.* CERVIZ
 DESCERVIGAR
 descifrar *v.* CIFRAR
 descinta *v.* CINTA
 desclamar *v.* CLAMOR
 DESCLAVAR
 descocotar *v.* COCOTE
 descogotado *v.* COCOTE
 DESCOGOTAR
 DESCOLGAR (COLGAR 2)
 DESCOLORIDO (COLORADO)
 descollado *v.* CVELLO
 descollamiento *v.* CVELLO
 DESCOMEDIDO
 descomedimiento *v.* COMEDIDO
 descomedirse *v.* COMEDIDO
 descompasado *v.* COMPASAR
 DESCOMPONER
 descompostura *v.* DESCOMPONER
 descompuesto *v.* COMPONER
 DESCOMVLGAR
 DESCOMVNAL
 descomunion *v.* DESCOMVLGAR
 desconcertado *v.* CONCERTAR

DESCONCERTAR
 desconfiado *v.* CONFIAR
 DESCONFIAR
 DESCONFORMAR
 DESCONOCER
 desconocido *v.* CONOCIMIENTO
 desconocimiento *v.* DESCONOCER
 DESCONSOLAR
 desconsuelo *v.* DESCONSOLAR;
 CONSOLAR
 DESCONTAR (CONTAR)
 descontentarse *v.* CONTENTARSE
 desconvenible *v.* DESCONVENIR
 DESCONVENIR
 desconvversible *v.* DESCONVER-
 SAR; CONVERSAR
 DESCONVERSAR
 DESCORAZNADO
 descoraznamiento *v.*
 DESCORAZNADO
 descorchador *v.* DESCORCHA
 DESCORCHAR (CORCHO)
 descornar *v.* CVERNO
 descortes *v.* CORTE 2
 DESCORTEZAR (CORTEZA)
 DESCOSER (COSER)
 descoyuntar *v.* COYVNTVRA
 DESCREER
 descreído *v.* CARA 3; DESCREER
 DESCREVIR
 descripción *v.* DESCREVIR
 descubrimiento *v.* DESCVBRIR
 DESCVBRIR
 descubrir la cabeza *v.* GORRA
 DESCVENTO (DESCONTAR)
 DESCVIDAR
 DESCVLPAR
 descuydo *v.* DESCVIDAR
 DESDE
 DESDEN
 DESDENTADO
 desdentar *v.* DESDENTADO

desdeñable *v.* DESDEN
 desdeñar *v.* DESDEN
 desdeño *v.* DESDEN
 desdeñoso *v.* DESDEN
 desdezir(se) *v.* DECIR
 DESDICHA
 desdichado *v.* DESDICHA
 DESDORAR
 desdorar *v.* DORAR
 DESEAR
 DESECHA (DESHACERSE).
 DESECHAR
 DESEMBAINAR
 DESEMBARAÇAR (EMBARAÇAS)
 desembarcadero *v.* EMBARCAR
 desembargador *v.* EMBARGAR
 desembargar *v.* EMBARGAR
 desembargo *v.* EMBARGAR
 desembaynar *v.* VAYNAS
 DESEMBOCAR (BOCA)
 desembolsar *v.* BOLSA; EMBOLSAR
 desemboltura *v.* DESEMBOLVER;
 BOLVER
 DESEMBOLVER (BOLVER)
 desembolverse *v.* BOLVER
 DESEMBRAÇAR (BRAÇO)
 DESEMBRAVECKERSE
 DESEMBRIAGARSE
 DESEMBVCHAR (DESBVCHAR;
 BYCHE)
 desempachar *v.* DESEMBVCHAR
 DESEMPACHO
 DESEMPALAGAR
 DESEMPAREJAR (DESPAREJAR)
 desempedrador *v.* DESEMPEDRAR
 DESEMPEDRAR (EMPEDRADO)
 DESEMPEGAR
 DESEMPEÑAR
 DESEMPEREZAR
 DESEMPOLVORAR
 DESEMPVLGAR
 desenalvar *v.* DESALVAR

DESENCABESTRAR
 DESENCADENAR
 DESENCANTAR
 DESENCAPOTAR
 DESENCASAR
 desencavalgar *v.* DESCAVALGAR;
 ENCAVALGAR
 DESENCAXAR (ENCAXAR)
 desencerrar *v.* CERRAR
 desencogerse *v.* COGER
 DESENCONARSE
 DESENFADARSE
 DESENFARDELAR
 DESENFRENAR (FRENO)
 DESENGAÑAR
 desengaño *v.* DESENGAÑO
 DESENGRVDAR
 DESENHETRAR (BEHETRIA)
 desenlavararse *v.* DESLAVO-
 NARSE
 DESENLAZAR
 desenmarañar *v.* MARAÑA
 desenquadrado *v.*
 ENQVADERNAR
 DESENQVADERNAR (QVADERNAS)
 DESENREDAR
 DESENSAÑAR
 DESENSEÑAR
 DESENTERRAR
 DESENTONADO
 DESENTONAR
 DESENTRAÑAR (ENTRAÑAS)
 deseos *v.* DESEAR
 DESESPERADO
 DESESPERAR
 DESFALCAR
 DESFALLECER
 desfavor *v.* DESFAVORECER
 DESFAVORECER (DISFAVOR;
 FAVORABLE)
 desfaxado *v.* FAXAR
 DESFIGVRAR

DESFLAQUECER
 desflemar *v.* FLEMA
 DESFLOCAR
 DESFLORAR (FLOR)
 DESFOGAR
 DESFRVTAR (FRVTA)
 desgajadura *v.* DESGAJAR
 DESGAJAR (GAJO)
 desgalgadero *v.* GALGA 2
 desgalgado *v.* GALGO
 desgalgarse *v.* GALGA 2
 DESGANARSE (GANA)
 desgañirse *v.* GAÑIR
 DESGARRAR (GARRA)
 desgarro *v.* DESGARRAR; GARRA
 desgarron *v.* DESGARRAR; GARRA
 DESGAYRE
 desgaznarse *v.* GRAZNAR 1
 DESGOVERNAR (GOVERNAR 2)
 DESGRACIA
 desgraciado *v.* DESGRACIA
 desgraciarse *v.* DESGRACIA
 desgreñada *v.* CABELLERA
 DESGREÑAR (GREÑA)
 desguarnecer *v.* GVARNECER
 DESGVSTAR (GVSTAR)
 desgusto *v.* DESGVSTAR
 DESHARRAPADO (HARAPO)
 DESHAZER
 DESHAZERSE (HAZER 2)
 deshebrar *v.* HEBRA
 DESHEREDAR
 DESHERRAR (HIERRO 1)
 DESHILAR (HILANDERA)
 DESHOJAR
 deshollar *v.* HOLLEJO
 deshollinar *v.* HOLLIN
 deshonestidad *v.* DESONESTO;
 HONESTO
 deshonesto *v.* HONESTO
 desiderable *v.* DESEAR
 DESIERTO

DESIGVAL (IGVAL)
 DESJARRETAR
 DESLAVADO (LAVAR)
 deslavamiento *v.* DESLAVADO
 DESLAVONARSE
 DESLAYDADO
 deslaydor *v.* DESLAYDADO
 DESLEAL
 deslealtad *v.* DESLEAL
 DESLENGVADO (LENGVA 2)
 DESLEYR
 DESLIAR (LIA 2)
 desliçar *v.* LISVRA
 DESLIGAR
 DESLINDAR
 deslizado *v.* LISVRA
 DESLIZAR (LISVRA)
 DESLOMAR
 deslomarse *v.* LOMO
 DESLVCIDO (LVZ)
 DESLVMBRADO
 DESLVMBRAMIENTO
 DESLVMBRAR
 deslumbrarse *v.* ALVMBRAR
 desluzido *v.* LVZ
 desmaçolar *v.* DESMAZOLADO
 DESMALLAR (MALLA)
 desmamparar *v.* MANECILLAS
 DESMANDADO
 DESMANDARSE (DESMANDADO)
 desmaneada *v.* DESMANEARSE
 DESMANEARSE
 DESMANOTADO (MANOTADA;
 AMÑARSE)
 DESMANTELAR
 DESMARAÑAR
 DESMARRIDO
 DESMAYARSE
 DESMAYO 1
 DESMAYO 2, *s.* MAYA
 DESMAZALADO
 DESMEDRAR

DESMEDRO
 DESMELENADO
 desmembracion *v.* DESMEMBRAR
 DESMEMBRAR
 DESMEMORIADO
 DESMENGVAR
 DESMENTIR
 DESMENVZAR
 DESMERECER
 DESMESVRARSE
 DESMIGAJAR
 DESMOCHAR (MOCHO)
 desmoler *v.* DEMOLER
 DESMONTAR (MONTON)
 desmotadera *v.* DESMOTAR
 DESMOTAR (MOTAS)
 desnarigado *v.* NARIZ
 DESNARIGAR
 DESNATAR (NATAS)
 DESNATVRALIZARSE
 DESNV DAR
 DESOBEDECER
 DESOBLIGAR
 DESOCVPAR (OCVPAR)
 DESOLAR
 DESONESTO
 desolladamente *v.* DESOLLAR
 DESOLLAR (HOLLEJO)
 desollinar *v.* HOLLIN
 DESONRA
 desorden *v.* DESORDENAR
 DESORDENAR
 DESOVAR (GVEVO)
 despachador *v.* DESPACHAR
 DESPACHAR
 despacho *v.* DESPACHAR
 DESPAJAR
 DESPALMAR
 DESPAMPANAR
 DESPAMPLONAR *s.* DESPLAZER
 desparatado *v.* DISPARATE

DESPARCIR
 DESPARECER
 DESPAREJAR
 DESPARPAJAR
 DESPARRAMAR
 DESPARTIR
 DESPAVESAR
 DESPAVILADERAS (PAVILO)
 despavilador *v.* DESPAVILADERAS
 despavilar *v.* DESPAVESAR;
 PAVILO
 despavorido *v.* PAVOR
 DESPEARSE
 despeçonarse *v.* PEÇON
 despechado *v.* APECHVGAR
 DESPECHO (APECHVGAR)
 DESPECHVGAR
 DESPEDAZAR (PEDAÇO)
 despedida *v.* DESPEDIR
 DESPEDIR
 despegamiento *v.* DESPEGAR
 DESPEGAR
 despego *v.* DESPEGAR
 DESPEJAR
 DESPELOTADO
 despelotar *v.* DESPELOTADO
 DESPELVZARSE
 DESPENAR
 DESPENDER
 despensas *v.* DESPENDER
 dispensero *v.* DESPENDER
 despeñadero *v.* DESPEÑARSE
 DESPEÑAR
 DESPEÑARSE
 DESPEPITADO (PEPITA)
 despepitarse *v.* DESPEPITADO;
 PEPITA
 DESPERDICIAI
 DESPEREZARSE
 desperezo *v.* DESPEREZARSE
 DESPERTADOR
 DESPERTAR

DESPILFARRADO
 despinçadera *v.* MOTAS; PINZAS
 despinçar *v.* MOTAS; PINZAS
 DESPINTAR (PINTAR)
 despinzar *v.* PINZAS
 DESPIOJAR
 DESPLAZER
 DESPLEGAR
 desplomado *v.* PLOMO
 DESPLVMAR
 DESPOBLADO
 DESPOBLAR
 DESPOJAR
 despojo *v.* DESPOJAR
 despolvorar *v.* DESEMPOLVORAR
 DESPOLVOREAR (POLVOS)
 desposada *v.* ESPOSAS
 desposaja *v.* DESPOSAR
 DESPOSAR
 desposorios *v.* DESPOSAR
 despotico *v.* DESPOTO
 DESPOTO
 despreciar *v.* DESPRECIO
 DESPRECIO
 DESPVES
 DESPVNTAR 1, 2
 desquajarse *v.* QVAJADA
 DESQVARTIZAR
 DESQVAXADO
 desquaxamiento *v.* DESQVAXADO
 DESQVAXAR
 DESQVICIAR (QVICIO)
 DESQVIXARAR (QVIXADA)
 desreglador *v.* REGLA
 DESREGLARSE
 desrostrarse *v.* ROSTRO
 desservicio *v.* DESSERTIR
 DESSERTIR
 DESTAJAR
 destajero *v.* DESTAJAR
 DESTAJO
 DESTAPAR

DESTAZAR	DETERIORAR
DESTECHAR	determinacion <i>v.</i> DETERMINAR
DESTEMPLAR	DETERMINAR
DESTERRAR	DETRAS
DESTETAR (TETA)	DETRAVES
destierro <i>v.</i> DESTERRAR	DETRIMIENTO
destilacion <i>v.</i> DISTILATORIO	DEVCALION
DESTINAR	DEVDA
destino <i>v.</i> DESTINAR	deudo <i>v.</i> DEVDA
DESTORCER	deudor <i>v.</i> DEVDA
DESTRAL	DEVTERONOMIO
destralexa <i>v.</i> DESTRAL	devanadera <i>v.</i> DEVANAR
DESTRAVAR	DEVANAR
DESTREZA	DEVANEAR
destripa <i>v.</i> TRIPERIA	DEVANTAL (DELANTAL)
destripar <i>v.</i> TRIPAS	DEVARAR <i>s.</i> DESVANECER
DESTROCAR	(VARAR)
DESTRON (ADESTRAR)	devengar <i>v.</i> FIDALGO 3
DESTRONCAR <i>s.</i> DESREGLARSE	DEVER
(TRONCO)	DEVIEDO
DESTROZAR	DEVIESO
DESTRVIR	divisa <i>v.</i> DIVISA; DIVISAR
DESVNIR	devisero <i>v.</i> DIVISAR
DESVSAR	DEVOTAS
DESVAN	DEVOTO
DESVANECER	dexacion <i>v.</i> DEXAR
desvarar <i>v.</i> DEVARAR	DEXAR
DESVARIAR	DEXEMPLAR (EXEMPLO)
DESVELAR (VELA 2)	DEXENXO (DECENSO; CATARRO)
DESVENTVRA	DEXO
desvergonçado <i>v.</i> VERGVENÇA	DEZENO
desvergonçarse <i>v.</i> DESVER-	dezidor <i>v.</i> DECIR
GVENÇA	DEZIEMBRE
DESVERGVENÇA	dezima <i>v.</i> DEZIMO
desviaos <i>v.</i> AVAOS	DEZIMO
DESVIAR	dezmar <i>v.</i> DEZMERA
desvio <i>v.</i> DESVIAR; VIAJE	DEZMERA
DESVIRGAR	dezmero <i>v.</i> DEZMERA; PVERTOS
desvirtuado <i>v.</i> VIRTUOSO	DIA
DETENER	dia egypciaco <i>v.</i> AZIAGO
detenimiento <i>v.</i> DETENER	DIA- (<i>prefijo</i>)
deterioracion <i>v.</i> DETERIORAR	DIABLO

diablura *v.* DIABLO
 DIACITRON *s.* DIAZ
 diaconato *v.* DIACONO
 DIACONO
 DIADEMA
 diademato *v.* DIADEMA
 DIAERESIS *s.* DENTELLADAS
 DIAFANO
 DIAFRAGMA
 diafurfuris *v.* ESTOCAFRIS
 DIAGARGANTA
 Diago *v.* DIEGO
 DIALECTICA
 dialectico *v.* DIALECTICA
 DIALECTO
 DIALOGISMO
 DIALOGO
 DIALTEA (MALVAVISCO)
 DIAMANTE
 DIAMETRO
 DIAQVILON
 DIARIO *s.* DIA
 DIARREA
 DIAZ
 dibuxador *v.* DIBVXAR
 DIBVXAR (BOX)
 dibuxo *v.* DIBVXAR; BOX
 DICERNIR
 DICIPLINA
 diciplinado *v.* DICIPLINA
 DICIPLINARSE
 DICHA 1, *s.* DECIR
 DICHA 2
 DICHO (DECIR)
 DICHOSO 1, *s.* DICHA 1
 DICHOSO 2
 DIDIMO
 DIECES *s.* DIEZ
 DIEGO
 DIENTE
 DIESTRA
 DIESTRO (DIESTRA)

DIETA 1, 2, 3
 DIEZ
 diezmo *v.* DEZMERA; DIEZ
 DIFERIR
 DIFICIL
 dificultar *v.* DIFICIL
 dificultoso *v.* DIFICIL
 difinicion *v.* DIFINIR
 difinido *v.* DIFINIDOR
 DIFINIDOR
 DIFINIR
 difinitivo *v.* DIFINIR
 DIFVNTO
 DIFVSO
 DIGERIR
 digestion *v.* DIGERIR; INDIGESTO
 DIGESTOS
 DIGNARSE
 DIGNIDAD
 DIGNO
 DIGRESION
 dilacion *v.* DILATAR
 DILATAR
 dileccion *v.* DILECTO
 DILECTO
 DILEMA
 DILIGENCIA
 diligenciero *v.* DILIGENCIA
 diligente *v.* DILIGENCIA
 DILVVIO
 disminucion *v.* DIMINVIR
 DIMINVIR
 diminuto *v.* DIMINVIR
 DIMISORIAS
 DINAMARCHA
 DINERO
 DINOSIS
 diocesaneo *v.* DIOCESIS
 DIOCESIS
 DIONISIO
 DIOS
 dipsaco *v.* CARDA

diputacion *v.* DIPVTAR
 diputado *v.* DIPVTAR
 DIPVTAR
 DIQVES
 DIS—
 disanto *v.* DIA
 disbarate *v.* DESBARATAR
 DISCERNIR (CERNER)
 DISCIPVLO
 DISCO
 DISCOLO
 DISCORDAR
 DISCORDIA
 DISCRECION
 DISCRETO (DISCERNIR)
 DISCVLPA
 DISCVRRIR
 DISCVRSO (CVRSO)
 DISENSION *s.* DISSENTIR
 DISENTERIA
 DISFAMAR
 DISFAVOR
 disfigurarse *v.* FIGVRA
 DISFORME (FORMAR)
 disformidad *v.* DISFORME;
 FORMAR
 DISFRAZ (DISFRAZARSE;
 FRAÇADA)
 DISFRAZARSE
 disimulo *v.* DISSIMVLADAMENTE
 DISLATE
 DISMINVIR
 disonar *v.* CONSONAR
 DISPARAR (DISPARATE)
 DISPARATE (DISLATE)
 dispendio *v.* DISSIPAR
 DISPENSABLE
 DISPENSACION
 DISPENSAR
 DISPONER
 disposicion *v.* DISPONER
 DISPVTA

DISPVTABLE
 DISPVTAR
 DISSENTIR
 DISSIMVLADAMENTE
 DISSIMVLAR
 dissipador *v.* DISSIPAR
 DISSIPAR
 DISSOLVCION
 DISSOLVER
 dissoluto *v.* DISSOLVCION
 DISSONANCIA
 dissonante *v.* DISSONAR
 DISSONAR
 distante *v.* DISTAR
 DISTAR
 destilacion *v.* DISTILATORIO
 DISTILAR
 DISTILATORIO
 DISTINCION
 DISTINGVIR
 distinto *v.* DISTINGVIR
 distribucion *v.* DISTRIBVIR
 DISTRIBVIR
 distribuydor *v.* DISTRIBVIR
 DISTRITO
 DITADO
 DITAMO (CABRA)
 DIVRETICO
 diurnal *v.* DIVRNO; DIARIO
 DIVRNO (DIARIO)
 diversidad *v.* DIVERSO
 DIVERPO
 DIVERSORIO (MESON)
 DIVERTICVLO
 DIVERTIMIENTO
 DIVERTIRSE
 DIVIDIDO
 DIVIDIR
 DIVIESO
 DIVINIDAD
 DIVINO (DIVINIDAD)
 DIVISA

DIVISAR 1, *s. DEVIESO*
 DIVISAR 2, *s. DIVISAR*
 divisible *v. DIVIDIR*
 DIVORCIO *s. DIVERTIMIENTO*
 DIVVLGAR
 DIX
 DIZQVE
 DOBAR *s. DOBLAS ZAHENES*
 DOBLA
 dobladilla *v. DOBLON*
 DOBLADO
 DOBLAS ZAHENES *s. DOBLA*
 DOBLE
 DOBLEGARSE
 DOBLERIA
 doblez *v. DOBLADO*
 doblo *v. DOBLE*
 DOBLON (DOBLA)
 DOCIL
 docilidad *v. DOCIL*
 doctor *v. FISICO; MEDICO*
 DOCTRINA
 DOGAL
 DOGMA
 dogmatista *v. DOGMA*
 dogmatizante *v. DOGMA*
 dolencia *v. DOLERSE; ADOLECER*
 DOLERSE *s. DOLOR*
 doliente *v. DOLERSE; ADOLECER*
 DOLO
 DOLOR
 dolorido *v. DOLERSE*
 domador *v. DOMAR*
 DOMAR
 domesticarse *v. DOMESTICO*
 DOMESTICO
 domesticquez *v. DOMESTICO*
 DOMINACION
 DOMINACIONES
 DOMINGO
 dominguero *v. DOMINGO*
 DOMINGVILLO

dominica *v. DOMINGO*
 dominico *v. SANTO DOMINGO*
 DOMINIO
 domino *v. DON 1*
 DON 1, 2, 3
 don de Dios *v. CELIDONIA*
 DONACION
 DONADO
 DONAIRE
 DONATIVO
 donatorio *v. DONATIVO*
 DONCAS
 DONCELLA *s. DONZEL*
 DONCELLVECAS
 Don Domingo *v. DOMINGVILLO*
 DONOSO
 DONQVES
 DONZEL *s. DONCAS*
 DORADA (ORADA)
 DORADILLA
 DORAR
 dormida *v. DORMIR 2*
 dormilon *v. DORMIR 2*
 DORMIR 1, 2
 dormitar *v. DORMIR 2*
 dormitorio *v. DORMIR 2*
 DORNAJO
 dornillo *v. DORNAJO*
 DOROTEY
 DOS
 DOSEL
 DOSIS
 dotacion *v. DOTE*
 dotal *v. DOTE*
 dotar *v. DOTE*
 DOTE
 DOZE
 dozena *v. DOZE*
 dozenal *v. DOZE*
 DOZIENTOS
 DRACHMA
 DRAGON

DRAGONERA
 DRAGONTEA (ÇVMILLO)
 dragontia *v.* DARAGONTIA
 DRAMA
 DRASGO
 DROMEDARIO (CAMELLO)
 DROMO
 DRVIDAS
 DRYADES
 DVAR
 dubda *v.* DUDA
 DVCADO
 DVCHO
 DVDA
 dudoso *v.* DVDA
 duecho *v.* DVCHO; CONDVCHO
 DVELO 1, 2
 DVENDE
 DVEÑA
 DVEÑAS
 DVEÑO
 DVERO
 DVLCE
 DVLÇOR
 DVLIA
 DVQVE
 DVQVESA
 dura *v.* TVRAR
 durable *v.* DVRAR
 duracion *v.* DVRAR
 DVRAR
 DVRAZNO
 dureta *v.* DORNAJO
 dureza *v.* DVRAR
 DVRMIENTE
 DVRO

E

E
 EBANO
 EBORA

EBRO
 ECCLESIASTES
 ECCO
 ECEPTO
 ECEPTVADO
 ECEPTVAR
 ECIJA
 ECLESIASTICO
 ECLIPSE
 ECLIPTICA
 ECVMENICO
 echacuervo *v.* CVERVO
 ECHADIZOS *s.* ECHADO
 ECHADO *s.* ECHAR
 ECHAR *s.* ECEPTVADO
 echenas *v.* REMORA
 echo *v.* ECCO
 EDAD
 EDICTOS
 edificador *v.* EDIFICIO
 EDIFICAR
 EDIFICIO
 EDIL
 efe *v.* BESVGVETE
 EFECTO
 EFECTVAR
 EFEMERIDES (ANALES)
 efesio *v.* EFESO
 EFESO
 EFETA
 EFIMERA
 EGIDIO
 EGLOGA
 EGREGIO
 egypciaco *v.* AZIAGO
 EILA
 EL
 ELADA
 ELAR
 ELCHE 1, 2
 ELDA
 ELEBORO

ELECCION *s.* ELEGIR
 electo *v.* ELECCION
 elector *v.* ELECCION
 ELECTRO (ALAMBRE; ALAMO;
 AMBAR)
 electuario *v.* LETVARIO
 ELECHO
 ELEFANCIA
 ELEFANTE
 ELEGANCIA
 ELEGIA
 elegiaco *v.* ELEGIA
 ELEGIR
 elemental *v.* ELEMENTO
 ELEMENTO
 ELENA
 ELENCO (PERLA)
 elencho *v.* ALJOFAR; ELENCO
 elevacion *v.* ELEVAR
 ELEVAR
 ELEYSON (KYRIE ELEYSON)
 elichryso *v.* AMARANTO
 ELITROPIA
 Elmo *v.* ERASMO 1
 ELNA
 ELOQVENCIA
 eloquente *v.* ELOQVENCIA
 ELVIRA
 ella *v.* EL
 ello *v.* EL
 EMAFRODITO
 EMANAR *s.* MANAR
 EMANCIPAR
 embaçar *v.* COLOR BAÇA
 EMBAIR
 embalar *v.* BALA
 embalixar *v.* BALIXA
 EMBARAÇAR
 embaraço *v.* EMBARAÇÂR
 embaraçoso *v.* EMBARAÇAR
 EMBARARSE *s.* ENTVRBIAR
 EMBARBASCAR *s.* EMBARRAR 2

embarcacion *v.* EMBARCAR
 embarcadero *v.* EMBARCAR
 EMBARCAR
 EMBARGAR
 embargo *v.* EMBARGAR
 EMBARNIZAR
 EMBARRAR 1, *s.* BARRO
 EMBARRAR 2
 embañador *v.* ENVASAR
 EMBATE (BATIR 2)
 EMBAVCAR *s.* EMBAIR
 EMBAVLAR (BAVL)
 EMBAXADA
 EMBAXADOR (BESAR)
 embaydor *v.* EMBAIR; IVEGO 2
 embaymiento *v.* EMBAIR
 embaynar *v.* VAYNAS
 EMBAZAR *s.* EMBAVLAR
 embeber *v.* BEBER 2
 embelar *v.* ENTOLDAR
 embeleco *v.* EMBELESADO; ENVE-
 LECO; VELEÑO
 EMBELESADO (VELEÑO)
 EMBELESAR
 EMBEODAR
 EMBETVNAR *s.* BETVN
 EMBEVECER
 EMBEVECIDO
 EMBIAR
 EMBIDAR 1, 2
 EMBIDIA
 EMBIDIADO
 embidiar *v.* EMBIDIADO
 EMBIDIOSO (EMBIDIA)
 embion *v.* EMBIAR
 EMBIVDAR 1, *s.* BIVDA
 EMBIVDAR 2
 EMBLANQVECER
 EMBLEMA
 EMBOLBER
 EMBOLSAR (BOLSA)
 EMBOLTORIO (BOLVER)

embolver *v.* BOLVER
 emboque *v.* TOQVE
 EMBORRACHARSE (BORRACHO)
 emboscada *v.* BOSQVE;
 EMBOSCARSE
 EMBOSCARSE (BOSQVE)
 EMBOTAR(SE) (BOTO 1)
 EMBOTIJAR(SE) (BOTIJA)
 EMBOVARSE
 EMBOVECERSE
 embrasar *v.* BRAÇO 4
 EMBRAVECERSE (BRAVO)
 embregatse *v.* BREGA
 EMBRIAGARSE
 EMBRION
 EMBVDO
 embuelto *v.* BOLVER
 EMBVSTE
 embustero *v.* EMBVSTE
 embutido *v.* EMBVTIR; EMBLEMA
 EMBVTIR
 EMELGA
 emendacion *v.* EMENDAR
 EMENDAR *s.* ENMASCARARSE
 emendarse *v.* EMIENDA
 EMIENDA (EMENDAR)
 EMISFERIO
 EMPACHAR
 EMPACHARSE
 empacho *v.* EMPACHAR;
 EMPACHARSE
 EMPADRONAR
 EMPALAGARSE
 EMPALAR
 EMPALIADA (COLGAR 2)
 empaliar *v.* EMPALIADA;
 COLGAR 2
 EMPALIZADA
 empanada *v.* EMPANAR 1, 2
 EMPANAR 1
 EMPANAR 2, *s.* PANIAGVA
 EMPAPAR

empapelar *v.* PAPELES
 EMPAREJAR
 emparentar *v.* PARIENTE
 EMPAVESADA 1
 EMPAVESADA 2, *s.* PAVES
 EMPEÇAR
 EMPECER
 EMPEDERNIRSE
 EMPEDRADO
 empedrador *v.* EMPEDRADO
 EMPEDRAR
 EMPEGAR
 EMPEINE
 EMPELLON (IMPELER)
 EMPEÑADO
 EMPEÑAR
 EMPEORAR
 empeorarse *v.* PEOR
 EMPERADOR
 EMPERATRIZ
 EMPEREZAR
 EMPERO
 EMPERRARSE
 EMPHITEOSI
 emphiteotico *v.* EMPHITEOSI
 emphiteusis *v.* AMORTIZAR
 emphyteota *v.* EMPHITEOSI
 EMPICAR
 EMPINAR(SE) (PINA)
 EMPIOLAR (PIGVELAS)
 EMPIRICO (EXPERIENCIA)
 emplaçar *v.* CITAR; PLAÇA
 EMPLASTAR
 emplasto *v.* EMPLASTAR
 EMPLAZADO
 EMPLAZADOR
 EMPLAZAMIENTO
 EMPLAZAR (CITAR)
 EMPLEAR
 empleo *v.* EMPLEAR
 EMPLYMAR (PLYMA 2)
 EMPOBRECER

EMPOÇAR (POÇO)
 EMPOLLAR (POLLO)
 EMPONÇOÑAR (PONÇOÑA)
 EMPRENDER
 EMPRENTA
 EMPREÑAR
 empreñarse *v.* PREÑADA
 empresa *v.* EMPRENDER
 EMPRESTADO
 EMPRESTAR
 emprestado *v.* EMPRESTADO;
 PRESTAR
 EMPRINGAR
 EMPVJAR
 empujon *v.* EMPVJAR
 EMPVLGVERAS (CVERNO)
 empuñadura *v.* EMPVÑAR
 EMPVÑAR
 EMPVRIAS
 EMVLO
 EN
 enagenacion *v.* AGENO
 ENAGENAR (AGENO)
 ENALBARDAR (ALBARDA)
 ENALMAGRADO (IVDIO)
 ENALMAGRAR (ALMAGRE;
 ESTREMADVRA)
 ENAMORADO
 ENAMORAR
 ENAMORARSE
 ENANO
 ENARCAR
 ENARMONARSE
 enbelesado *v.* ENVELECO
 encabeçonamiento *v.* CABEÇA
 ebcabeçonar *v.* CABEZON
 encabelladura *v.* CABELLERA
 ENCABESTRAR (CABESTRO)
 encadenado *v.* CADENA
 ENCADENAR
 encalabriado *v.* CALABRIADA
 ENCALABRINAR

ENCALAR (CAL)
 ENCALVECER
 encallar *v.* QVILLA
 ENCALLARSE
 ENCALECER
 ENCAMARAR (CONSEIO DE
 CAMARA)
 ençamarrado *v.* ÇAMARRO
 encambornado *v.* ENCAMBRO-
 NARSE
 ENCAMBRONARSE
 ENCAMINAR
 ENCAMISADA (CAMISA)
 encandiladera *v.* ENCANDILAR
 encandiladora *v.* ENCANDILAR
 ENCANDILAR s. CANDELA
 ENCANECEER (CANA)
 encantador *v.* ENCANTAR
 encantamiento *v.* ENCANTAR
 ENCANTAR
 encante *v.* ALMONEDA
 encañado *v.* ENCAÑAR; CAÑA
 encañadura *v.* ENCAÑAR; CAÑA
 ENCAÑAR (CAÑO)
 ENCAÑONAR
 ENCAPAR
 ENCAPOTADO
 encaramado *v.* CARAMILLO
 ENCARAMAR (CARAMILLO)
 encarat *v.* CARA 3
 ENÇARÇARSE s. ÇARÇAPARRILLA
 ENCARCAVINAR (CARCAVA)
 ENCARCELAR (CARCELERO)
 ENCARECEDOR
 ENCARECER (CARESTIA)
 encarecido *v.* ENCARECER
 encarecimiento *v.* ENCARECER;
 CARESTIA; CARECER
 ENCARGAR (CARGO)
 encarnacion *v.* ENCARNAR
 ENCARNAR
 ENCARNIZARES

- encarnizarse *v.* ENCARNIZARES;
 CARNEMOMIA
 encartacion *v.* CARTA
 ENCARTAR (CARTA)
 ENCASAR
 ENCASTILLARSE (CASTILLO)
 ENCAVALGAR
 ENCAJAR 1, *s.* CAXA
 ENCAJAR 2
 ENCAJE (ENCAJAR 1, 2)
 ENCENAGAR (CIENO)
 encencerrada *v.* CENCERRO
 ENCENDER
 encendimiento *v.* ENCENDER
 ENCENIZAR (CENIZIENTO)
 encensar *v.* ENCENSARIO
 ENCENSARIO *s.* ENCIENSO
 ENCENTAR (ESTRENA)
 encepar *v.* CEPA
 encerado *v.* ENCERAR
 ENCERAR (CERA)
 encerramiento *v.* ENCERRAR;
 CERRAR
 ENCERRAR (CERRAR)
 encestar *v.* CESTA
 ENCIA (*cf.* ENZIAS)
 ENCIENSO
 encierro *v.* ENCERRAR
 ENCIMA
 ENCINA
 encinar *v.* ENCINA
 enclavar *v.* CLAVO 2
 enclocarse *v.* CLVECA
 ENCOGER (COGER)
 ENCOGERSE
 encogimiento *v.* ENCOGERSE;
 COGER
 ENCOLAR
 ENCOLERIZARSE (COLERA)
 ENCOMENDADO
 ENCOMENDAR
 encomienda *v.* ENCOMENDADO
 ENCOMIO
 ENCONARSE
 ENCONTINENTE
 ENCONTRA
 encontradas *v.* ENCONTRAR
 ENCONTRAR
 ENCONTRON
 ENCORAR
 encorbada *v.* CORVA
 encorbar *v.* CORVA
 ENCORDAR
 ENCORDELAR (CORDEL)
 ENCORDIO
 ENCORDONAR
 encoroçar *v.* COROÇA; ENCORO-
 ZAR
 ENCOROZAR
 ENCORPORAR
 ENCORVADA
 ENCORVAR
 encovar *v.* CVEVA
 ENCRESPAR
 ENCRVDECERSE
 ENCRVELECERSE
 ENCRVZIJADA (CRVZERO)
 ENCVBAR (CVBA)
 ENCVBERTAR
 encubierta *v.* ENCVBRIR
 encubridora *v.* ENCVBRIR
 ENCVBRIR (CVBRIR)
 ENCVENTRO (ENCONTRON)
 ENCVMBRAR (CVMBRE)
 ENCYCLOPAEDIA
 enchancletado *v.* CHANCLETAS
 encharcarse *v.* CHARCO
 ENCHAS
 ENCHIRIDION
 endaluvio *v.* DILVVIO
 ENDE
 ENDECHAS
 endechera *v.* ENDECHAS
 ENDEMONIADO (DEMONIO)

endereçar *v.* DERECHO
 ENDEREZAR
 enderezcote *v.* ENDEREZAR
 ENDIABLADO
 ENDIBIA (CHICORIA)
 ENDILGAR
 endivia *v.* CHICORIA
 endonar *v.* DON 3
 ENDRINA
 endrinal *v.* ENDRINA
 endrino *v.* ENDRINA
 endromis *v.* DROMO
 endulcir *v.* DVLÇOR
 ENDVLZAR
 ENDVRAR (DVRAR)
 ENDVRECERSE
 ENEAS
 ENEBRO
 ENECHADO
 enechar *v.* ENECHADO
 ENEGRECER *s.* ENMVDECER
 ENELDO
 enelenso *v.* MACHO
 ENEMIGO
 ENERGIA
 ENERGVMENNO
 ENERIZARSE
 ENERO
 ENFADAR
 enfado *v.* ENFADAR
 ENFADOSO
 ENFALDAR
 enfaldarse *v.* FALDA
 ENFARDELAR
 ENFASI *s.* EMPIRICO
 enfermar *v.* ENFERMO; FIRMA
 enfermedad *v.* ENFERMO
 ENFERMERIA
 enfermizo *v.* ENFERMO
 ENFERMO
 ENFIN
 ENFINTA

ENFITEOSI (EMPHITEOSI)
 ENFLAQVECEK (FLACO)
 ENFRASCARSE (FRASCA)
 ENFRENAR
 enfrenarse *v.* FRENO
 enfrente *v.* FRENTE
 enfriadera *v.* FRIAR
 ENFRIAR
 ENFVNDAR
 engafecer *v.* GAFO
 ENGALANAR
 engalanarse *v.* GALAN
 engañador *v.* ENGAÑO
 engañapastor *v.* ÇVMAYA
 engañar *v.* ENGAÑO
 ENGAÑO
 engañoso *v.* ENGAÑO
 ENGARABATAR
 ENGARBAR
 ENGARGANTAR (GARGANTA 2)
 ENGARRAFAR
 ENGASTAR
 ENGATAR (GATEAR)
 ENGAVILLAR
 ENGAYTAR
 ENGAZAR (GOZNES)
 ENGENDRAR
 engia *v.* ENZIAS
 ENGOLFARSE (GOLFO)
 engolondrinarse *v.* GOLONDRINA
 engolosinarse *v.* GOLOSMEAR;
 GVLA
 engomar *v.* GOMA
 ENGORDAR (GORDO)
 engorotar *v.* GORRA
 engoznar *v.* GOZNES
 ENGRANDECER (GRANDE 2)
 ENGREIR
 ENGROSAR (GROSEK 2)
 ENGRVDO
 enguantado *v.* GVANTE
 enguecar *v.* GVECO

ENGVLIR
 enharinar *v.* HARINA
 ENHASTIAR
 ENHEBRAR *v.* HEBRA
 ENHECHIZAR
 enherbolado *v.* IERVA 1
 ENHESTAR
 ENHETRAR (BEHETRIA; INTRICADO)
 enhiesto *v.* ENHESTAR
 enhilar *v.* HILAR
 enhocar *v.* HVECO
 enhornar *v.* HORNO
 ENIGMA
 enigmático *v.* ENIGMA
 enjaezar *v.* IAEZ
 enjaguadientes *v.* ENJAGVAR
 enjaguadura *v.* ENJAGVAR
 ENJAGVAR *s.* ENJALVEGAR
 ENJALMA *s.* ENVILECER
 ENJALVEGAR *s.* ENJALMA
 enjaular *v.* IAVLA
 ENIORGINARSE *s.* IORGINA
 enjorginar *v.* BRVXA
 enjoyar *v.* IOYEL
 enjugar *v.* IVGO
 enlabiador *v.* LABEONES
 enlabiar *v.* LABEONES
 ENLAZAR
 ENLODAR
 ENLVTAR
 ENMAGRECERSE
 enmarañar *v.* MARAÑA
 ENMASCARADOS *s.* CARATVLA
 ENMASCARARSE
 ENMVDECER
 ENNOBLECER (NOBLE)
 enojadizo *v.* ENOJOSO
 ENOJAR
 enojo *v.* ENOJAR
 ENOJOSO
 ENORME

enquadernador *v.* ENQVADERNAR; QVADERNAS
 ENQVADERNAR *s.* ENCVBAR (QVADERNAS)
 enquillar *v.* ENCALLARSE
 enquillotrado *v.* ENQVILLOTARSE
 ENQVILLOTARSE
 enramada *v.* ENRAMAR
 ENRAMAR
 enrauciarse *v.* RANCIO
 enredadera *v.* ENREDAR
 ENREDAR (RED)
 enredo *v.* ENREDAR
 enriçar *v.* RIZO
 ENRIDAR
 ENRIQUE
 ENRIQUECER
 ENRIQUEZ
 ENRISCARSE
 enristrar *v.* RISTRE
 ENRIZAR 1, 2
 ENRONQUECERSE
 ENROSCAR (ROSCA)
 ENRVBIAR
 ENSALADA *s.* ENSALMO
 ENSALÇAR
 ensalmador *v.* ENSALMO
 ensalmar *v.* ENSALMO; SALMO
 ENSALMO
 ensamblador *v.* ENSAMBLAR
 ENSAMBLAR
 ensancha *v.* ENSANCHAR
 ENSANCHAR
 ensancharse *v.* ANCHO
 ensanchas *v.* ANCHO
 ENSANDECER (SANDIO)
 ensangostar *v.* ANGOSTO
 ENSANGRENTAR
 ENSAÑARSE (SAÑA)
 ensario *v.* BADAJOZ
 ENSARTAR

ensavanado *v.* SAVANAS
 ENSAVANAR
 ensayador *v.* ENSAYAR
 ENSAYAR
 ENSAYO
 ensemble *v.* ENSAMBLAR
 ENSENSIOS
 ENSEÑA
 ENSEÑAR
 enseño *v.* ENSEÑAR
 ENSILAR (SILO)
 ENSILLAR
 ENSOBERVEVERSE 1, *s.* SOBERVIA
 ENSOBERVEVERSE 2
 ENSORTIJAR
 ENSVCIAR (ÇVZIO)
 ensuziarse *v.* ÇVZIO
 ENTABLAR
 ENTALLADOR (TALLA 1)
 ENTALLAR (TALLA 1)
 ENTECADO
 ENTENDER
 ENTENDIMIENTO
 enterarse *v.* ENTERO
 entereza *v.* ENTERO
 ENTERNECER
 ENTERO
 enterramiento *v.* ENTERRAR;
 OBSEQVIAS
 ENTHYMEMA
 ENTIBIAR
 ENTIZNAR
 ENTOLDAR (TOLDO)
 ENTONAR (TONO)
 ENTONCES
 ENTORCHA
 entorchado *v.* ENTORCHA
 ENTORNAR
 ENTORPECER
 ENTORTAR
 ENTRADA *s.* ENTRAR
 entrambos *v.* AMBOS

entramos *v.* AMBOS
 entrapado *v.* TRAMPA
 entrañable *v.* ENTRAÑAS
 ENTRAÑAS
 ENTRAR
 ENTRE (ENTREDIENTES)
 ENTREDICHO
 ENTREDIENTES
 entredoble *v.* ENTREDIENTES
 ENTREMES
 ENTREMETER
 ENTREPONER
 ENTRESACAR
 ENTRESVELO (ESTVDIO)
 ENTRETANTO
 ENTRETENER
 entretenimiento *v.* ENTRETENER
 ENTRETEXER
 ENTREVALO
 ENTRICAR
 ENTRISTECER
 ENTRONIZAR
 entronizarse *v.* TRONO
 ENTVRBIAR (TVRBIO)
 ENVASAR
 ENVEJECER
 envejecerse *v.* VEJEZ; VIEJA
 ENVELECO
 envelesarse *v.* VELEÑO
 ENVES
 envesado *v.* ENVES
 ENVILECER
 ENXAMBRE
 ENXERIR
 ENXERTO (ADOPTAR)
 enxugador *v.* ENXVGAR
 ENXVGAR
 ENXVLLLO
 ENXVNDIA
 ENXVTO *s.* ENXVGAR
 ENZERRO
 ENZIAS

ENZINA (*cf.* ENCINA)
 EOLO
 EPHEMERIDES
 ephesio *v.* EFESO
 EPICEDIO
 EPICO
 epicureo *v.* EPICVRO
 EPICVRO
 EPICHEIA
 EPIFANIA
 EPIFANIO
 EPIGLOSIS
 EPIGRAMA
 EPILEPSIA
 epilogar *v.* EPILOGO
 EPILOGO
 EPIMENIDES
 EPISTOLA
 epistolario *v.* EPISTOLA
 EPITAPHIO
 EPITETO
 EPITHALAMIO
 EPITHIMIA
 EPITOME
 EQVIDAD
 EQVINOCIAL
 EQVINOCIO
 EQUIVALENTE
 EQVIVOCO
 ERA 1, 2, 3
 ERARIO
 ERASMO 1, 2
 erbaje *v.* IERVA 1
 ERBOLARIO
 ERECCION 1
 ERECCION 2, *s.* EREGIR
 erecto *v.* ERECCION 2
 EREDAD
 EREDADO
 EREDAMIENTO
 EREDERO
 eregia *v.* EREJE

EREGIR
 EREJE
 eremitica *v.* ERMITA
 eretical *v.* EREJE
 erica *v.* BREZO 1
 erina *v.* BREZO 1
 ERISIPVLA
 ERIZARSE
 ERIZO 1, 2 (CASTAÑA)
 ermanarse *v.* HERMANO
 ermandad *v.* HERMANO
 ermano *v.* HERMANO
 ERMAPHRODITO (EMAFRODITO)
 ERMAR
 ERMITA
 ermitaño *v.* ERMITA
 EROICO
 ERRAR
 errarse *v.* HERRAR
 ERRATICO
 ERRON
 ERRONEA
 erroneo *v.* HERRADA
 error *v.* HERRAR 1
 ERVAJE
 ERVATV
 ervatum *v.* ERVATV
 ESAIAS
 ESBIRRO (BIRRHOS)
 escabechar *v.* ESCABECHE
 ESCABECHE
 ESCABELO (ESCAÑO)
 escabro *v.* ESCABROSO
 ESCABROSIDAD (ESCABROSO)
 ESCABROSO
 ESCABVLLIRSE (BVLLIR)
 escacado *v.* ESCAQVE
 ESCALA
 ESCALAMO
 escalar *v.* ESCALA
 ESCALDAR
 ESCALENTARSE

ESCALERA
 escalmo *v.* ESCALAMO
 ESCALON
 ESCALONA
 ESCAMA
 escamada *v.* ESCAMOSO
 escamar *v.* ESCAMOSO
 ESCAMOCHOS
 ESCAMONEA
 ESCAMOSO
 ESCAMPAR
 escampo *v.* ESCAMPAR
 ESCANCIAR (CANDIA)
 escandalizado *v.* ESCANDALO
 ESCANDALO
 escandaloso *v.* ESCANDALO
 ESCANDELAR
 ESCANDERBECH
 ESCANDIR
 ESCAÑA
 ESCAÑO
 ESCAPAR (CAPA)
 ESCAQVE
 ESCARAMVÇA
 ESCARAMVJO
 ESCARAPELA
 ESCARAVAJO (ESCARAMVJO)
 ESCARCELA
 ESCARCHA
 escarchado *v.* ESCARCHA
 escarda *v.* ESCARDAR
 escardadera *v.* ESCARDAR
 ESCARDAR
 ESCARIOTE
 ESCARLATA (GRANA)
 escarmentar *v.* ESCARMIENTO
 ESCARMIENTO
 ÉSCARNECER
 escarnio *v.* ESCARNECER
 ESCAROLA (CHICORIA)
 ESCARPIN
 ESCARVAR

ESCASO
 ESCATIMAR
 escatimosamente *v.* ESCATIMAR
 ESCAVAR
 ESCLARECER (CLARO)
 ESCLAVA
 esclavitud *v.* ESCLAVA
 ESCLAVO (CLAVO 2)
 ESCLAVONIA
 ESCLVIR
 ESCOBA
 ESCOBAJO
 ESCOBAR
 ESCOBILLA 1, 2
 ESCOBON
 ESCODA
 ESCOFIA (COFIA)
 escofiado *v.* ESCOFIETA
 ESCOFIETA s. COFIA
 ESCOFINA
 escofion *v.* ESCOFIETA
 ESCOGER (COGER)
 ESCOGIDO
 ESCOLANO
 ESCOLAR
 ESCOLASTICO
 ESCOLIMOSO
 ESCOLIOS
 ESCOLOPENDRA
 ESCOLTA
 ESCOMBRAR
 ESCONDER
 escopedina *v.* ESCOPETINA;
 ESCVPIR
 ESCOPETA (ARCABVZ)
 escopetazo *v.* ESCOPETEAR
 ESCOPETEAR
 ESCOPETERO
 ESCOPETINA
 ESCOPLO
 escorçado *v.* ESCVERZO
 ESCORIA (ESCVRIAL)

ESCORIAL
 ESCORPION
 ESCORZAR
 ESCORZONERA
 ESCOTA
 ESCOTAR (ESCODA; ESCOTA;
 COTA 2)
 ESCOTE (COTA 2)
 ESCOILLON
 escotista *v.* ESCOTO
 ESCOTO
 ESCOZER
 ESCOZIMIENTO
 escozor *v.* ESCOZIMIENTO
 escritilla *v.* CRIADILLAS 2
 ESCRITO (CRIADILLAS 2)
 ESCRITOR *s.* ESCRIVIR
 ESCRITORILLO
 ESCRITORIO
 ESCRITVRA
 ESCRITVRARIO
 ESCRIVA
 ESCRIVANIA 1, 2
 ESCRIVANO
 ESCRIVIENTE (ESCRIVANO)
 ESCRIVIR 1, 2
 escrofula *v.* LAMPARON
 ESCRVPVLO 1, 2
 escrupuloso *v.* ESCRVPVLO 1
 ESCVCHA
 ESCVCHADERA
 ESCVCHAR
 escudarse *v.* ESCVDO
 escuderear *v.* ESCVDERO
 ESCVDERO (GENTILES 3)
 escudete *v.* ESCVDO
 ESCVDILLA
 escudillar *v.* ESCVDILLA
 ESCVDO
 escudriñador *v.* ESCVDRIÑAR
 ESCVDRIÑAR
 ESCVELA

ESCVELAS
 escuerço *v.* ESCORZAR
 ESCVERZO
 ESCVETO
 ESCVLAPIO
 ESCVLPIR
 ESCVLTOR
 escultura *v.* ESCVLTOR
 ESCVPIDVRA
 ESCVPIR
 ESCVRECER
 ESCVRIAL
 ESCVSABARAJAS
 escusable *v.* ESCVSARSE
 ESCVSADO
 ESCVSAR
 ESCVSARSE
 ESCVTAR
 ESCVTRINIO *s.* ESCVDRIÑAR
 escherçado *v.* ESCORZAR
 escherço *v.* ESCORZAR
 ESDRVXVLO
 ESECVTORIA
 ESENCIA *s.* ESQVIVAR
 ESENTO
 ESFERA
 ESFINGE
 esforçarse *v.* ESFORZADO 1
 ESFORZADO 1, 2
 ESFORZAR
 ESFVERZO
 ESGRIMA
 ESIDO
 ESLADOR
 ESLAVON
 ESLAVONAR
 ESLEIR
 ESMALTAR
 ESMALTE
 ESMERALDA
 ESMERARSE
 ESMEREJON (ALCOTAN)

ESMERIL 1, 2 (ARCABVZ)
 esmerilazo *v.* ESMERIL 2
 ESPACIARSE
 ESPACIO
 ESPACIOSO
 ESPADA (ESPADAS; BASTON 3)
 ESPADACHIN *s.* ESPATVLA
 ESPADAÑAR
 ESPADAS *s.* ESPALADINAR
 ESPADERO
 ESPADILLA
 espadillar *v.* ESPADILLA
 ESPADON (CALVO; CAPAR)
 ESPALADINAR *s.* ESPADA
 ESPALDA (ESPALDAS)
 espaldarazo *v.* ESPADA
 espaldas *v.* HAVA
 ESPALDERES
 ESPALDVDO
 ESPALMAR (BREA; DESPALMAR)
 espaller *v.* BOGAR
 ESPANDIR
 espantable *v.* ESPANTAR
 espantadizo *v.* ESPANTAR
 ESPANTAJO
 espantaniños *v.* ESTOCAFRIS
 ESPANTAR
 ESPAÑA
 español *v.* ESPAÑA
 españolado *v.* ESPAÑA
 ESPARAVAN
 ESPARAVEL
 ESPARCIR *s.* ESPARTEÑA
 (DESPARCIR)
 ESPARCIRSE
 ESPARRAGADO
 ESPARRAGO (ESPARRAGVERA)
 ESPARRAGVERA
 ESPARRANCARSE
 ESPARTEÑA (ALPARGATE;
 ESPARTO)
 esparteria *v.* ESPARTO

espartero *v.* ESPARTO
 ESPARTO (ISOPO)
 ESPATVLA 1, *s.* ESPADILLA (ES-
 PALDA)
 ESPATVLA 2, *s.* ESPARTEÑA
 ESPECIAL
 especialidad *v.* ESPECIAL
 especiaro *v.* ESPECIAS
 ESPECIAS
 ESPECIE
 especiero *v.* ESPECIAS
 especificacion *v.* ESPECIFICAR
 especificadamente *v.* ESPECI-
 FICAR
 ESPECIFICAR
 ESPECTACVLO
 ESPEDIR
 ESPEJA
 ESPEJAR
 ESPEJO
 ESPEJVELO
 espelugarse *v.* ESPELVZOS
 ESPELVZOS
 ESPERANÇA
 ESPERAR
 ESPERIA
 EXPERIENCIA
 ESPERMA
 ESPESAR
 espeso *v.* ESPESAR
 espesura *v.* ESPESAR
 ESPETAR
 espetera *v.* ESPETAR
 espeto *v.* ESPETAR
 ESPIA 1, 2
 ESPIGA
 espigadero *v.* ESPIGAR
 ESPIGAR
 ESPIGON
 ESPILOCHO
 ESPINA
 espina ratera *v.* BRVSCO

ESPINACA
 ESPINAR
 ESPINAZO
 ESPINEL
 espinela *v.* ESPINEL
 ESPINETA
 ESPINILLA
 espino *v.* ESPINAR
 espinosa *v.* ESPINAR
 ESPINPVERCO
 ESPION *s.* ESPIA 1
 ESPIRAR *s.* ESPIRITV
 espiritado *v.* ESPIRITV
 ESPIRITV
 ESPIRITVAL
 ESPITA
 ESPITAL
 ESPITALERO
 ESPLIEGO
 espolada *v.* ESPOLEAR
 espoleadura *v.* ESPOLEAR
 ESPOLEAR (*ESPVELA* 1)
 ESPOLON
 espolonada *v.* ESPOLEAR
 ESPONDEO
 ESPONJA
 ESPONJARSE
 esponjoso *v.* ESPONJARSE
 ESPORTEAR *s.* ESPVERTA
 ESPORTILLA
 ESPORTILLO
 ESPORTON
 ESPOSA
 ESPREMIDVRA
 espresion *v.* ESPRIMIR
 espresiva *v.* ESPRIMIR
 espreso *v.* ESPRIMIR
 ESPRIMIR
 ESPVELA 1, 2
 ESPVERTA
 espulgar(se) *v.* PVLGA
 ESPVMA (*ESPVMAR*)

espumadera *v.* ESPVMAR
 ESPVMAR
 ESPVMARAJOS
 ESPVRIO
 ESQVADRA 1, 2
 ESQVADRON
 ESQVELETO
 ESQVERO (*ESCARCELA*)
 ESQVIFE
 esquilador *v.* ESQVILO
 ESQVILAR
 ESQVILMO
 ESQVILO
 ESQVILON *s.* ESQVINANCIA
 (CAMPANA)
 ESQVINA (*ANGVLO*; *ESQVINADO*)
 ESQVINADO
 ESQVINANCIA (*ADIVAS*)
 esquinencia *v.* ESQVINANCIA
 esquito *v.* QVITO
 ESQVIVAR
 esquiveza *v.* ESQVIVEZA
 ESQVIVO
 esempto *v.* ESENTO
 ESSENCION *s.* ESENTO
 ESTABLE
 ESTABLEAR *s.* ESTABLO
 ESTABLECER
 ESTABLECIDO
 ESTABLECIMIENTO
 ESTABLO
 ESTACA (*ESTACAS*)
 estacada *v.* ESTACA; *ESTACAS*
 ESTACAS
 ESTACIONERO
 ESTADAL (*ANA* 2)
 ESTADIZO *s.* ESTAR (*ESTANCAR*)
 ESTADO 1, 2
 ESTADOS *s.* ESTRADO
 ESTAFA
 estafador *v.* ESTAFAR
 ESTAFAR

ESTA FERMO
 ESTAFETA
 ESTALLIDO
 Estambor *v.* CONSTANTINOPLA
 estambrado *v.* ESTAMBRE
 estambrar *v.* ESTAMBRE
 ESTAMBRE
 estameña *v.* ESTAMBRE
 ESTAMPA
 ESTAMPAR
 ESTAMPIDA
 estampido *v.* ESTAMPIDA
 ESTANCAR
 ESTANCIA
 estanco *v.* ESTANCAR
 ESTANDARTE
 ESTANGVRRIA
 ESTANQVE
 estanquillo *v.* ESTANQVE
 ESTANTE
 ESTANTEROL
 ESTANTIGVA
 estantio *v.* ESTAR
 ESTAÑAR (ESTAÑO)
 ESTAÑO 1
 ESTAÑO 2 (*err. por* ESTRAÑO) *s.*
 ESTRANGERO
 estaquilla *v.* ESTACAS
 ESTAR
 ESTATVA
 ESTATVARIOS
 ESTATVIR
 ESTATVRA
 ESTATVTO
 ESTE 1, 2
 ESTEBA (ESTEVA)
 estebado *v.* ESTEBA; ESTEVADO
 ESTEFANIA
 ESTELA
 ESTELION
 ESTENDER
 ESTENDIDO

ESTEPA
 ESTERA
 esterar *v.* ESTERA
 ESTERCOLAR
 estercolero *v.* ESTERCOLAR
 ESTERIL
 esterilizar *v.* ESTERIL
 esterilla *v.* ESTERA
 ESTEVA
 ESTEVADO
 ESTEVAN
 ESTIBAR (ESTEVA)
 ESTIERCOL *s.* ESTERA
 ESTIGIA
 estilar *v.* ESTILO
 ESTILO
 estima *v.* ESTIMAR
 estimable *v.* ESTIMAR
 estimacion *v.* ESTIMAR
 ESTIMAR
 ESTIO
 ESTIPENDIO
 ESTIPVLACION
 ESTIPVLAR
 ESTIRAFLOXA
 ESTIRAR
 ESTIRON
 ESTIRPAR 1, 2
 ESTIRPE
 ESTITICO 1, 2
 ESTIVAL (ESTIO)
 ESTIZA
 estizarse *v.* ESTIZA
 ESTOCADA
 ESTOCAFRIS
 ESTOFADO 1, 2
 ESTOFAR
 ESTOICOS
 ESTOLA 1, 2
 estomachal *v.* ESTOMAGO
 ESTOMAGO
 ESTOPA (LINO)

ESTOQUE (ESTOCADA)
 ESTORAQUE
 ESTORÇIJON s. ESTORVO
 ESTORNIJA
 ESTORNINO
 ESTORNV DAR
 ESTORNVDO (ESTORNV DAR)
 ESTORVAR
 ESTORVO
 ESTRABON
 ESTRAGA s. ESTRATEGEMA
 ESTRADA
 estradillo v. ESTADOS
 ESTRADIOTÀ
 ESTRADIOTE
 ESTRADO (DATHEDRALITIOS;
 ESTADOS)
 ESTRAGAR
 estragarecados v. VILLETE
 estrago v. ESTRAGAR
 estrangeria v. ESTRANGERO
 ESTRANGERO
 estrañar(se) v. ESTAÑO 2
 estrañeza v. ESTAÑO
 estraño v. ESTAÑO 2
 ESTRATEGEMA
 estrecharse v. ESTRECHVRA
 ESTRECHO
 ESTRECHVRA
 entregadera, -o, v. ESTREGARSE
 ESTREGAR
 ESTREGARSE
 ESTRELLA (ESTRELLARSE)
 ESTRELLARSE s. ESTRELLERO
 estrellera v. ESTRELLERO
 ESTRELLERO
 estremado v. ESTREMOZ
 ESTREMADVRA
 ESTREMERÀ
 ESTREMO
 ESTREMOZ
 ESTRENA

estrenar v. ESTRENA
 ESTRIGES
 estrivar v. ESTRIVO
 ESTRIVO (ESTAFA; ESTAFAR)
 ESTROPAJO
 ESTROPEADO
 ESTROPEAR
 ESTROPEÇAR
 ESTROPIEÇO
 ESTRVENDO
 ESTRVJAR (CAPAR)
 ESTVCHE
 ESTVDIANTE
 ESTVDIAR
 ESTVDIO
 ESTVDIOSO
 ESTVFA
 estufar v. ESTVFA
 estufilla v. ESTVFA
 ESTVNIGA
 ESTVPRO
 ESTVQVE
 ESTVRION
 ETENAZAR s. ATEMORIZAR
 ETERNIDAD
 ETERNIZARSE
 ETERNO
 ETICA
 Etiope v. ETIOPIA
 ETIOPIA
 etiopisa v. ETIOPIA
 ETYMOLOGIA
 EVCHARISTIA
 EVDOXIA
 Eudoxio v. EVDOXIA
 EVFRASIA
 EVFRATES
 EVFROSINA
 eufrosina v. BORRAXA
 EVGENIO
 EVNVCO (CAPAR)
 EVRO

EVROPA
 EVSEBIO
 EVSTAQVIO
 EVTERPE
 EVTHYMIO
 eutrapelia *v.* EVTROPELIA
 EVTROPELIA
 EVA
 EVACVAR
 EVANGELICO
 EVANGELIO
 evangelista *v.* EVANGELIO
 EVANGELIZAR
 EVANO
 EVARISTO
 EVORA
 EX *v.* OX
 EXAGERAR
 EXAMEN
 examinador *v.* EXAMINAR
 EXAMINAR
 EXARCHO
 exasperar *v.* ASPERO
 EXCEPCION
 exclusion *v.* EXCLVIR
 EXCOMVNION
 EXE 1, 2 (HARRE; TO)
 EXEA
 execucion *v.* ESCVTAR
 executar *v.* ESCVTAR
 EXECVTOR (FIEL EXECVTOR;
 OBISPO; ESCVTAR)
 EXEDRA
 exemplar *v.* DECHADO; EXEMPLO
 exemplificar *v.* EXEMPLO
 EXEMPLO
 EXEQVIAS
 EXERCER
 EXERCICIO
 EXERCITADO
 EXERCITO
 exi *v.* TO

exidia *v.* EXIDO
 EXIDO
 EXIMIO
 eximir *v.* EXIMIO
 EXISTENCIA
 EXODO
 exorbitancia *v.* EXORBITANTE;
 CARRIL
 EXORBITANTE
 exortacion *v.* EXORTAR
 EXORTAR
 expedicion *v.* ESPEDIR
 expediente *v.* ESPEDIR
 expedir *v.* ESPEDIR
 expositivo *v.* ESCOLASTICO
 EXPOSITO
 EXPRIMIR (ESPRIMIR)
 EXQVISITO
 EXTASI
 extensive *v.* INTENSIVO
 EXTINGVIR
 extrinseco *v.* INTRINSECO
 EZIJA
 EZQVERRA

F

F
 faba *v.* F
 FABIANO
 FABIO
 hablar *v.* HABLAR
 FABRICA
 FABRICIO
 FABVLA
 FABVLISTA
 FABVLOSO
 FACa
 FACANEA
 FACECIA
 FACIL
 facilidad *v.* FACIL
 FACILITAR

FACINEROSO
 FACION 1, 2
 FACISTOR (ATRIL)
 facistorio *v.* FALDA
 FAÇOLETO (*cf.* FAZOLETO)
 FACVLTAÐ
 FACVNDIA
 FACVNDIO
 FADAS
 FADAS BOAS
 FADRIN
 FAETON
 FAGINA
 FAISA
 FAISAN
 FALAGO
 FALAGVEÑO
 falaguero *v.* FALAGVEÑO
 FALCAR *s.* FALCON 3
 falcato *v.* CARRO 1
 FALCES
 falcia *v.* VENCEJO
 FALCIDIA
 FALCON 1; 2, 3
 falconete *v.* FALCON 2, 3;
 ARCAVZ
 FALDA (MONTE)
 faldas (poner — en cinta), *v.*
 ENFALDAR
 faldellin *v.* FALDA
 faldeta *v.* FALDA
 faldilla *v.* FALDA
 faldistorio *v.* FALDA
 faldon *v.* FALDA
 FALIR
 falo *v.* CARNICOL
 FALQVIAS
 falsario *v.* FALSIA
 FALSETE
 FALSIA
 falsificador *v.* FALSIA
 falsificar *v.* FALSIA

FALSO
 FALSOPETO
 FALTA 1, 2
 FALTAR (FALTA 2)
 FALTO
 FALTRIQUERA (FARTRIQUERA)
 FALVA
 fallar *v.* HALLAR
 FAMA
 FAMILIA
 FAMILIAR
 FAMILIARIDAD
 FAMOSO (LIBELO)
 FANAL (ALFARO)
 FANDVLARIO (FALDA)
 FANEGA
 fanegada *v.* FANEGA
 fanfarria *v.* FANFARRON
 FANFARRON
 fanfarronear *v.* FANFARRON
 FANTASEAR
 FANTASIA 1, 2
 FANTASMA (ESTANTIGVA)
 FANTASTICO
 farandula *v.* FARANDVLERO
 FARANDVLERO, —A
 FARAVTE (FARANDVLERO)
 farçante *v.* FARSA
 FARDA
 FARDEL
 FARDO
 FARFANTE
 farfullador *v.* FARFVLLAR
 FARFVLLAR
 FARISEO
 FARMACOPOLA
 FARO (ATALAYA)
 farol *v.* FARO; ALFARO
 farpa *v.* ÇARPAR; HARPAR
 FARRO
 FARSA
 farsante *v.* FARANDVLERO; FARSA

FARTALES
 fartar *v.* HARTAR
 FARTRIQUERA
 farza *v.* FARSA
 fas *v.* FASTA
 FASOLES
 FASTA (HASTA)
 FASTIDIO
 fastidioso *v.* FASTIDIO
 FASTO
 FATAL
 fatiga *v.* FATIGAR
 FATIGAR
 FATIMA
 fato *v.* HECHO
 FATOR
 FATORIA
 fausto *v.* FASTO
 FAVILA
 FAVOR
 FAVORABLE
 FAVORECER
 favorito *v.* FAVORECER
 FAXA (FAIXA)
 FAXAR
 FAXARDO
 faxero *v.* FAXA
 FAZ (HAZ)
 fazer *v.* HAZER 2
 FAZFIRIDO
 FAZIENDA
 FAZOLETO (*cf.* FAÇOLETO)
 FE
 FEA
 FEA COSA
 FEALDAD
 FEBLE
 FEBO
 FEBRERO
 FECHA
 fechizera *v.* FECHO 2
 FECHO 1, 2 (HECHO)

fedifrago *v.* FEMENTIDO
 FEDRIA
 FELICIANO *s.* FELIX
 FELICISSIMO
 FELICITAS
 FELIGRES
 FELIX
 FELIZ
 FELONIA
 FELPA
 FEMENCIA
 FEMENTIDO
 FENECER (FIN)
 fenecimiento *v.* FENECER; FIN
 FENIX
 FENO (HENO)
 FEO (FEA; FEA COSA)
 FERIA 1, 2
 feriado *v.* FERIA 2
 ferial *v.* FERIA 2
 feriar *v.* FERIA 1
 ferida *v.* FERIR
 FERIR (HERIR)
 FERNANDO
 FERNAN GONZALEZ
 FEROZ
 FERRERVELO
 FERRVMBRAL
 FERTIL
 fertilidad *v.* FERTIL
 fertilizar *v.* FERTIL
 FERVOR
 fervoroso *v.* FERVOR
 FESTEJAR
 FESTIVIDAD *s.* FIESTA
 FESTIVO (FESTIVIDAD)
 FESTON
 FEVDO
 fevista *v.* VISTA
 FEZ
 FIADOR (AMENTO)
 FIAMBRE

FIAMBRERAS
 fiança *v.* FIADOR
 FIAR
 ficción *v.* FICION; FINGIR
 FICION
 FIDALGO 1, 2, 3
 fideiusion *v.* DEDO
 FIDEOS
 FIEBRE
 FIEL
 FIEL EXECVTOR (OBISPO)
 FIELDAD
 FIELTRO
 FIERA
 fiereza *v.* FIERA
 fiero *v.* FIERA
 FLESTA
 figado *v.* HIGADO
 figon *v.* HIGVERA
 FIGVERA
 FIGVEROA (DONCELLA)
 FIGVRA
 figurar *v.* FIGVRA
 figurilla *v.* FIGVRA
 FIJAR 1, 2
 fijo de algo *v.* FIDALGO 1
 fijo de ganancia *v.* BARRAGAN
 FIL S. FILISTEOS
 FILADELFOS
 FILANDRIAS
 FILANTROPIA
 FILATERIA
 FILELI
 FILEMON
 FILIACION
 FILIAL
 FILIGRANA
 FILIPE 1, 2
 FILIPENDVLA
 FILIPINAS
 FILIPOS
 FILISTEOS

filo *v.* FIL
 FILOPATRO
 FILOPOLO
 FILOPONO
 FILOSOFO
 filosomia *v.* FISONOMIA
 FIN
 FINAL (FIN)
 finarse *v.* FIN
 fincar *v.* FIN
 fineza *v.* FINO
 fingidor *v.* FINGIR
 FINGIR
 FINIANA
 finiquito *v.* FIN
 FINISTERRAE
 FINO
 FIRMA
 firmeza *v.* FIRMA
 fiscal *v.* FISCO
 fiscalia *v.* FISCO
 fiscela *v.* FISCO
 FISCO
 FISGA
 FISGON
 física *v.* FISICO
 FISICO (MEDICO)
 FISIOLOGIA
 fisionomia *v.* FISONOMIA
 FISONOMIA
 FISTICO
 FISTO
 FISTOLA
 fistolete *v.* FLAVTA
 FITERO
 FIVCIA
 fíxo *v.* FIJAR 2
 FLACO
 FLAGELANTES (DICIPLINARSE)
 flagelo *v.* FLAGELANTES
 FLAMENCO
 FLAMINES

FLAMINIO
 FLAMVLA
 FLANDES
 flanelo *v.* FVSTA
 flaqueza *v.* FLACO
 FLAVTA
 flautado *v.* FLAVTA
 FLECHA
 flechar *v.* FLECHA
 flechazo *v.* FLECHA
 flechero *v.* FLECHA
 FLEGETON
 FLEMA
 flematico *v.* FLEMA
 FLEMON
 FLETE
 flocadura *v.* FLVECO
 FLOGEL
 FLOR (FLOREO)
 FLORA
 floral *v.* FLORA
 floreado *v.* FLOREO
 florecer *v.* FLORIDO
 FLORENCIA
 FLORENTIN
 FLOREO (LEVADA)
 FLORESTA
 FLOREZ
 FLORIDO
 florin *v.* FLORENTIN
 FLORINDA
 FLOS SANTORUM
 FLOTA
 FLOTAR
 floxedad *v.* FLOXO
 FLOXO
 FLVCTVAR
 FLVECO
 FLVIDO
 FLVSLERA
 FLVVIAL
 fluxlera *v.* FLVSLERA

FLVXO
 FOCA
 focico *v.* HOCICO
 FOCIGO
 FOFO
 FOGAR (FOGVERA)
 FOGON
 FOGOSO
 FOGVERA *s.* FVEGO
 FOJA 1, 2
 FOLGAR (HOLGAR)
 FOLIA
 FOLVZ
 FOLLA
 FOLLADO (FVELLES)
 FOLLAJE
 FOLLON (FVELLES)
 fomentacion *v.* FOMENTAR
 FOMENTAR
 FOMILLAN
 FONDILLON
 FONDO
 fondon *v.* FONDO; HONDON
 FONSADERA
 FONTANA
 FONTANAYA
 FONTANERO
 FONTECILLAS
 forañó *v.* HVRAÑO
 FORASTERO
 FORCA
 forçado *v.* FVERÇA; FORÇOSO
 FORÇAR
 forcejas *v.* FORÇOSO; FORÇVDO
 FORCEJON
 forcijon *v.* FORÇVDO
 FORÇOSO (FORÇADO)
 FORÇVDO *s.* FVERTE (FORÇADO)
 FORCHINA
 FORERA *s.* FORÇOSO
 forero *v.* FVERA
 FORJAR

FORMA	fraylezico <i>v.</i> FRAYLESCO
FORMAR	fraylia <i>v.</i> FRAYLE
FORMENTAR	FREÇA
FORNESINO	FRECHA
FORNICAR	FREGADERO
fornicio <i>v.</i> FORNICAR	fregado <i>v.</i> FREGADERO
FORNIDO	FREGAR
forro <i>v.</i> HORRO	fregona <i>v.</i> FREGADERO
fortalecer <i>v.</i> FORNICAR	FREIR
FORTALEZA	FRENECIA
FORTVNA	frenetico <i>v.</i> FRENECIA
FORTVNADO	frenillo <i>v.</i> FRENO
FOSA	FRENO
fosal <i>v.</i> FOSA	FRENTE
FOSCO	FRESAS
FOSO	frescal <i>v.</i> FRESCO
FRAÇADA <i>s.</i> FRASCO	FRESCO
FRAGA	frescura <i>v.</i> FRESCO
FRAGATA	fresneda <i>v.</i> FRESNO
FRAGIL	FRESNO
fragilidad <i>v.</i> FRAGIL	FREZA
FRAGOSA	frialdad <i>v.</i> FRIO
FRAGVA	FRIAS
FRAGVAR	FRIERAS (SAVAÑON)
FRANCES	FRIO
FRANCIA	friolengo <i>v.</i> FRIO
FRANCISCO	frioliento <i>v.</i> FRIO
FRANCO 1, 2 (FRANCOS)	frisa <i>v.</i> FRIO
FRANCOLIN	frisado <i>v.</i> FRIO
FRANCOS	frisar <i>v.</i> FRIO
FRANJAS	FRISO
FRANQVEAR	FRISOLES (FASOLES; PESOLES)
franqueza <i>v.</i> FRANCOS; FRAN-	FRISON
QVEAR	FRITO
franquicia <i>v.</i> FRANQVEAR	FRIVOLO
FRASCA (ENFRASCARSE)	FROMESTA
FRASCO	FRONDOSO
frasis <i>v.</i> FRASCO	FRONTAL (FRENTE)
frasquilla <i>v.</i> FRASCO	frontaleras <i>v.</i> FRENTE
FRAYLE	frontera <i>v.</i> FRENTE
fraylecillo <i>v.</i> FRAYLE	frontero <i>v.</i> FRENTE
FRAYLESCO	FRONTINO

frontispicio *v.* FRENTE
 fructifero *v.* FRVTA
 FRVCHO
 FRVGALIDAD
 FRVNZIR
 FRVSLERA
 FRVTA (FREIR)
 FRVTAGES
 FRVTERA
 FRVTERO
 fruto *v.* FRVTA
 fruxlera *v.* FRVSLERA
 fucia *v.* AFVCIAR
 FVEGO (FAMILIAR)
 fuego de San Anton, *v.* ERI-
 SIPVLA
 FVELLES
 FVEN
 FVENTE
 fuer *v.* FVERO
 FVERA
 fueras *v.* FVERA
 FVERÇA 1, 2
 FVERO
 FVERO JVZGO
 FVERTE 1, 2
 FVGAZ
 FVGITIVO
 FVINA
 fulanillo *v.* FVLANO; ÇVTANO
 FVLANO (ÇVTANO)
 FVLMINAR
 FVLLERIA
 FVLLERO
 FVMOROLAS
 fumosidad *v.* FVMOROLAS
 FVMVSTERRAE
 funabulario *v.* BOLTEAR
 funambulo *v.* MAROMA
 FVNDA
 fundacion *v.* FVNDA
 fundamento *v.* FVNDA

FVNDA
 fundicion *v.* FVNDA
 fundidor *v.* FVNDA
 FVNDA
 FVRIA
 FVRIAS
 FVRIOSO
 FVROR
 FVRRIEL
 furtifero *v.* FVGITIVO
 fusil *v.* HVNDA
 FVSLERA
 FVSTA
 FVSTAN
 fuste *v.* FVSTA
 fustero *v.* FVSTA
 fustigar *v.* FVSTA
 FVZIA

G

G
 GABALCOHOL
 GABALDON
 gabaço *v.* ESCARAMVJO
 GABELA
 gabia *v.* GAVIA
 GABRIEL
 GAÇAPO
 gacona *v.* GAVAN
 GACHAS
 gachnate *v.* GAZNATE
 GACHO (CACHO; AGACHARSE)
 GADIR
 GADITANO
 GAETA
 GAFAR
 GAFARRON
 GAFAS
 GAFETI
 GAFO (CACHO)
 GAGES
 GAGGIO

gaita *v.* MELECINA
 gajes *v.* GAGES
 GAJO
 GALA (HALA 2; HALAGAR)
 GALACIA
 GALAN
 galanteria *v.* GALAN
 GALAPAGO
 GALARDON
 galardonar *v.* GALARDON
 GALATEA
 GALAVARDO
 galbana *v.* GALAVARDO
 galbano *v.* GAVAN
 GALDRES
 galeaza *v.* GALERA
 galeon *v.* GALERA
 galeote *v.* GALERA
 GALERA
 GALERIAS
 Galfarros
 GALGA 1, 2
 GALGO
 galgueño *v.* GALGO
 galiciado *v.* GALIZIA
 GALILEA
 GALIZIA
 GALOCHA (ÇVECO)
 GALOCHAS
 GALOPE
 galopear *v.* GALOPE
 gallarda *v.* GALLO; ESCVELA
 GALLARDETES
 gallardia *v.* GALLO
 gallardo *v.* GALLO
 gallear *v.* GALLO; GARÇON
 GALLEGO (GALIZIA)
 GALLETA
 GALLIA
 GALLIANA
 GALLILLO (GVLA; EPIGLOSIS)
 GALLINA (BLANCA 1)

gallinero *v.* GALLINA
 gallito *v.* GALLO
 Gallo *v.* GALLOFO
 GALLO (GALLARDETES)
 GALLOCRESTA
 gallofear *v.* GALLOFO
 gallofera *v.* GALLOFO
 GALLOFO
 Gallogrecia *v.* GALACIA
 GAMBA
 GAMBARO
 gambeta *v.* GAMBA
 Gamboa *v.* OÑEZ
 GAMELLA 1, 2 (CAMELLA)
 gamito *v.* GAMO
 GAMO
 GAMON
 GAMVZA
 GANA
 ganadero *v.* GANADO
 GANADO
 ganancia *v.* GANAR; BARRAGAN
 ganancioso *v.* GANAR
 GANAPAN
 GANAR
 GANÇVA
 gançar *v.* GANÇVA
 GANÇVLES
 gancharo *v.* GANCHO
 GANCHO
 GANGA (CAÇA)
 GANGOSO
 GANIMEDES
 GANNIVETE *s.* GAÑIR
 ganoso *v.* GANA
 GANSINOS
 GANSO (ANSAR)
 GANZVA
 GAÑAN *s.* GANAR
 GAÑIR *s.* GAÑAN
 GAONA
 GARABATO

GARAÑON
 GARATVSA
 GARAY
 garbançal *v.* GARBANÇO
 GARBANÇO *s.* GARROVILLA
 garbançvelo *v.* FRISOLES
 garbillador *v.* GARBILLAR
 GARBILLAR (ALGARBE)
 garbo *v.* ALGARBE
 garbullo *v.* GARBILLAR
 GARÇA
 GARCETAS
 GARCI
 Garcia *v.* GARCI
 GARÇO (GARCETAS)
 GARÇON
 garçonear *v.* GARÇON
 garçota *v.* GARÇA; CERCETA
 GARDVÑA
 gargagiento *v.* GARGAJO
 gargagillo *v.* GARGAJO
 GARGAJO
 gargajoso *v.* GARGAJO
 GARGANTA 1, 2
 gargantilla *v.* GARGANTA 2
 GARGARISMO
 GARGOLA
 garguero *v.* GARGANTA 1; GAR-
 GARISMO
 garisea *v.* CARISEA
 GARITA
 GARLITO
 garlopa *v.* GARLITO
 GARNACHA
 GARRA (GARRAS; GARABATO)
 GARRAFA 1, 2
 GARRAMA (DERRAMAS)
 GARRAPATA
 GARRAS
 GARRIDO
 garrilla *v.* GARRAS
 GARROCHA

GARROCHON
 GARROFA
 GARROFAL
 gatton *v.* GARRA
 gattotazo *v.* GARROTE
 GARROTE
 gattotillo *v.* GARROTE
 GARROVA
 GARROVILLA
 garvillar *v.* ALGARBE
 GARVIN
 GASA
 GASAJÓ
 gascuence *v.* GASCVÑA
 GASCVÑA
 gastador *v.* GASTAR
 GASTAR
 gasto *v.* GASTAR
 GATA (CANDIL)
 GATEAR
 GATERA
 gatero *v.* GATERA
 GATILLO
 gato *v.* GATA; GATEAR
 GATO DE ALGALIA
 GATO MONTES
 gatopablo *v.* GATOPAVS
 GATOPAVS
 gatuña *v.* GATERA
 GAVACHOS
 GAVAN
 GAVANÇO
 GAVASA
 GAVELA
 GAVETA
 GAVIA
 GAVILAN (HIDALGO 2)
 GAVILLA
 GAVIOTA
 gayadas *v.* VELLORITA
 GAYADO
 gayete *v.* GAYO

GAYO
 GAYTA (GAYTERIA; CLYSTEL)
 GAYTERIA
 gaytero *v.* GAYTA
 gaytilla *v.* GAYTERIA
 gaz *v.* ALGAZARA
 GAZAFATON
 GAZAPERA
 gazapillo *v.* GAZAPERA
 GAZAPO
 GAZNATE (GRAZNAR)
 GAZOFILIACIO
 GAZPACHOS
 geccerina *s.* GETA
 gelar *v.* ELAR
 GELASIO
 GELVES
 GEMELOS
 GEMIR
 GENCIANA
 GENERAL 1, 2, 3, 4, 5 (AVLA)
 GENERALIFE
 GENERO
 generosidad *v.* GENEROSO
 GENEROSO
 GENESIS
 GENEVA
 GENGIBRE *s.* GENTILEZA
 genial *v.* GENIO
 GENIL 1, *s.* GENESIS
 GENIL 2, *s.* GENGIBRE
 GENIO
 GENIZARO
 GENTE
 GENTE GRANADA *s.* GRANADO
 GENTES
 GENTILDONA
 GENTILES 1, 2, 3
 GENTILEZA
 gentilhombre *v.* GENTILES 3
 gentilidad *v.* GENTILES 1
 GENOVA

GENOVESES
 GEOMANCIA
 geometra *v.* GEOMETRIA
 GEOMETRIA
 GEORGICA
 GERARCHIA
 gerigonga *v.* GITANO
 GERIGONZA
 geringa *v.* CLYSTEL; FLAVTA;
 SIRINGA
 GERION
 germania *v.* GERIGONZA
 GERMANIA 1, *s.* ALEMANIA
 GERMANIA 2
 GERONDA
 GERONIMO
 gerra *v.* GVERRA
 GERVNDIO
 GESTO
 GETA (HONGO)
 GETAS
 GIBA
 gibao *v.* CORCOBA
 GIBRALEON
 GIBRALFARO
 GIBRALTAR
 GIGANTE
 GIGANTOMACHIA
 GIGOTE
 GIL
 GILONA
 gimia *v.* SIMIA
 GIMNASIO
 GIMNESIAS
 GINEBRA
 GINEBRADAS
 GINES
 GINETA *s.* GINJAS
 GINETA 1, 2 (BRIDA)
 GINETE (BRIDA)
 gingidio *v.* EMBELESADO
 GINJAS

ginjol *v.* GINJAS; AÇVFEIFO

ginjola *v.* GINJAS

GIRA

GIRAFÁ

GIRALDETE

girdalina *v.* GIRALDETE

GIRALDO

GIRANDVLA

GIRAPLIEGA

GIRAR

GIRASOL

GIRIFALTE (SACRE)

GIRIGERO

GIRIGONZA

GIRNALDA 1, 2

GIROFE *s.* GIRIFALTE

giron *v.* GIRONA

GIRONA

GIRONA

gitaneria *v.* GITANO

GITANO

GITON

GITONES

GLADIADORES

GLADIOLO (ESPADAÑA)

GLICERIO

GLORIA

GLORIFICAR

GLORIOSO

GLOSA

glossa *v.* GLOSA; TESTO

glossador *v.* GLOSA

glossar *v.* GLOSA

GLOTON

glotonear *v.* GLOTON

glotoneria *v.* GLOTON

GNEMON

GNOSTICOS (NOSTICOS)

GOBI

GODO

Godofre *v.* GOFREDO

Godofredo *v.* GOFREDO

GODOY

goferia *v.* GOFO

GOFO

GOFREDO

GOLA (GVLA)

GOLDRE

GOLETA

GOLFO

GOLONDRINA

golondrino *v.* GOLONDRINA

golondro *v.* GOLONDRINA

golosina *v.* GOLA; GOLOSO

GOLOSMEAR (GOLA)

GOLOSO (GOLA; GVLA)

GOLPE

golpear *v.* GOLPE

gollete *v.* GOLA

golloria *v.* GOLFO

GOMA

GOMIA

GOMITAR (ARCA 2)

gomito *v.* GOMITAR

GONÇALO

GONDOLA

GONORREA

gordiflon *v.* GORDO

GORDO

gordolobillo *v.* GORDOLOBO

GORDOLOBO (BARBASCO)

GOREVEIA

GORGERA

GORGOJO

GORGONES

GORGONIO

GORGORITAS

GORJA

gorjeat *v.* GORJA

GORMAR

GORMAZ

GORRA

GORRION (CHIRRIAR)

gorron *v.* GORRA

GOTA 1, 2
 GOTACORAL
 gotera *v.* GOTA 1 .
 GOTICO *s.* GODO
 governacion *v.* GOVERNAR 1
 gobernador *v.* GOVERNAR 1
 governalle *v.* GOVERNAR 1
 GOVERNAR 1, 2
 gobierno *v.* GOVERNAR 1
 GOXE *s.* GOFO
 GOZAR *s.* GOBI (GOZO)
 GOZNES
 GOZO 1, *s.* GOBI
 GOZO 2
 GOZQVE
 GRACIA 1, 2
 GRACIA DEI
 GRACIAS
 GRACIOSO
 GRADA 1, 2
 gradario *v.* HACA
 GRADO 1
 GRADO 2, *s.* GRADOS 5
 GRADOS 1, 2, 3, 4, 5
 GRADVALES
 GRAFIER
 graja *v.* GRAJO; CORNEJA
 GRAJAL
 GRAJES
 GRAJO
 GRAMA (VERVENA)
 GRAMALLA
 GRAMATICO
 GRAMIL
 GRAMMATICA
 grampho *v.* CALAMBRE
 GRAN 1
 GRAN 2, *s.* GRANZONES
 GRANA (COCO 2)
 GRANADA 1, 2
 GRANADO (GRANADA; GENTE
 GRANADA)

GRANATE
 grança *v.* GRANZAS
 grançones *v.* TRAMOJO
 GRANDE 1, 2, *s.* GRAN 2
 grandeza *v.* GRANDE 2
 grandioso *v.* GRANDE 2
 granela *v.* ESCOBA
 granero *v.* GRANO 1
 grangeria *v.* GRANJA
 grangero *v.* GRANJA
 granillo *v.* GRANO 2
 GRANIZO
 GRANJA
 GRANO 1, 2 (ENVES)
 granpho *v.* CALAMBRE
 GRANZAS *s.* GRANATE
 GRANZONES *s.* GRANZAS
 GRAO
 GRASA 1, 2 (GOMA; VARNIZ;
 ENEBRO)
 GRASIENTO
 GRATIFICACION
 GRATIFICAR
 gratitud *v.* GRATIFICAR
 GRATO
 GRAVAR 1, 2
 GRAVE
 gravedad *v.* GRAVE
 gravissimo *v.* GRAVE
 GRAZNAR 1, *s.* GRAZNIDO
 GRAZNAR 2
 GRAZNIDO *s.* GRAJAL
 GRECIA
 GRECIZAR *s.* GRIEGO
 GREDa (CANDIA)
 gredal *v.* GREDa
 GREGORIA
 gregoriano *v.* GREGORIA
 GREGOPIO
 GREMIAL
 GREMIO
 grenche *v.* CLIN

GREÑAS
 greva *v.* GIGOTE
 GREVAS
 GREY 1, 2
 GRIAL
 grial *v.* GRIAL; ESMERALDA
 GRIEGO
 GRIETA
 GRIFO
 GRILLO
 GRIMA
 grimazo *v.* GRIMA
 GRIS
 GRISES
 GRITA
 GRITADOR
 gritar *v.* GRITA
 GROLANDIA
 GROSERO 1, 2
 grosseria *v.* GROSERO 2
 GROSVRA
 GRVA (CIGOÑAL)
 GRVESO
 GRVLLA (ÇANCO)
 GRVLLADA
 GRVMETE
 GRVMO
 gruñidor *v.* GRVÑIR
 GRVÑIR
 GRVPERA
 GRVTA
 GRVTESCO
 GVACHAPEAR
 GVACHARO
 GVADA
 GVADACELLAS *s.* GVADAZELETE
 GVADACENAS *s.* GVADACELLAS
 Guadacivas *v.* GVADACELLAS
 GVADAFION
 GVADAFIONES *s.* GVADAPERO
 GVADAHENAR
 GVADAHORTVNA

GREÑA (CABELLERA)
 GVADAIRA
 GVADAJEZ (GVADAVOZ)
 GVADALABIAR
 GVADALADIAR
 GVADALAXARA
 GVADALBACAR
 GVADALBARBO
 GVADALBVLLON
 GVADALBVNER
 GVADALCANA
 GVADALCAZAR
 GVADALEN
 GVADALERCE
 GVADALERTIN
 GVADALESTE
 GVADALETE
 GVADALHORRA
 GVADALHORZA
 Guadaliemar *v.* GVADALIMAR
 GVADALIMAR
 GVADALMALLETE
 GVADALMEDINA
 GVADALMELERA
 GVADALQVITON
 GVADALQVIVEXO
 GVADALQVIVIR (BETIS)
 GVADALVPE
 GVADAMECI
 GVADAÑA
 GVADAPERO
 GVADARIZA
 GVADARNES
 GVADARRAMA
 GVADARRANQVE
 GVADARROMAN
 GVADATORTILLO
 GVADAVOZ
 GVADAXARO
 GVADAXENIL
 GVADAXIRA
 GVADAZAHON

GVADAZELETE
 GVADAZVLEMA
 GVADIANA
 GVADIARO
 GVADIELA
 GVADIZ
 GVADOCH
 guai *v.* GVACHERO
 GVALDA
 GVALDRAPA
 gualdrapilla *v.* GVALDRAPA
 GVANTE
 guanteria *v.* GVANTE
 guantero *v.* GVANTE
 GVARDA
 guardainfantes *v.* TRAJE
 GVARDAJA
 GWARDAPOLVO
 GWARDAR
 guardia *v.* GWARDIAN
 GWARDIA
 GWARDIAN
 guardiania *v.* GWARDIAN
 guardoso *v.* GVARDA
 guarecer *v.* GVARIR
 guarida *v.* GVARIR
 GVARIR
 GVARISMO
 GVARNECER
 guarnicion *v.* GVARNECER
 guarnicionero *v.* GVARNECER;
 CVERO
 GVARNIR (GARNACHA; GVAR-
 NECER)
 GVAY
 GVAYA
 guayar *v.* GVAYA
 GVEBRA (VEBRA)
 GVECAR
 GVECO
 GVEDEXA
 guedexado *v.* GVEDEXA

GVERFANA
 GVERFANO
 GVERO (GVEVO)
 GVERRA
 guerrilla *v.* GVERRA
 guerta *v.* GVERTO
 GVERTO
 GVESA
 GVESCA
 GVESPED (HOSPEDAR)
 guespeda *v.* GVESPED
 GVESSO
 GVETE
 GVEVO
 GVIA
 guiar *v.* GVIA
 GVIJA (AGVIJA)
 gvijarral *v.* AGVIJA
 guijarrazo *v.* GVIJA
 guijarrillo *v.* GVIJA
 guijarro *v.* GVIJA; AGVIJA
 GVILLA (GVILLOTE)
 GVILLOTE (GVILLA)
 Guimaraez *v.* GVMARANES
 GVMARANES
 GVINDA
 GVINDALERA
 GVINDALETA
 guindar *v.* GVINDALETA
 GVINEA
 GVINEO
 GVIÑAR
 GVIPVZCOA
 GVIRNALDA (AMARANTO)
 GVISA
 GVISADO
 GVISANDO (TOROS DE GVISANDO)
 guisar *v.* GVISA; GVISADO
 GVITARRA (VIGVELA)
 guitarrero *v.* GVITARRA
 guitarrilla *v.* GVITARRA
 GVITON 1, 2

guizne *v.* GVIÑAR
 GVLA (GOLA)
 guloso *v.* GVLA
 gulloria *v.* GOLFO
 GVMENA
 GVRBION
 GVRRIION
 GVRVPERA (ARRITRANCA)
 gusanillo *v.* GVSANO
 GVSANO
 GVSTAR
 GVSTO
 GVZMAN
 GYMNOSOPHISTAS

H

H
 HA
 HABAR
 HABLA
 HABLAR
 hablilla *v.* HABLA
 HACA (HACANEAS; FACA)
 HAÇALEJAS
 HACANEAS (FACANEA)
 HACERA
 HACES
 HACHA 1
 HACHA 2, *s.* HACHONES
 HACHAZO
 HACHERO (HACHA 2)
 HACHONES
 hachuela *v.* HACHA 2
 HADA (HADO; FADAS)
 hadada *v.* HADA
 hadado *v.* HADO
 HADO
 HADROLLA
 hadrollero *v.* HADROLLA
 HALA 1, 2
 HALAGALA

HALAGAR
 HALAGO
 HALAGVEÑO
 HALCIONES
 HALCON
 HALDA
 HALIFA
 HALLAR
 HALLAZGO
 HAMACA
 hamadryades *v.* DRYADES
 HAMBRE
 HAMBREAR
 HAMBRIENTO
 HAMECES
 HANDRAJO
 HANEGA
 HANEGADA (FANEGA)
 HARAGAN
 HARAMBEL
 HARAPIEÇOS
 HARAPO
 HARBAR
 HARDA
 HARDALES
 HARINA
 harinero *v.* HARINA
 HARIZA
 HARNERO (CRIVO)
 HARO
 HARON (HARAGAN)
 HARONEAR
 HARPA (CITARA)
 HARPADO
 HARPAR
 HARPIAS
 HARPILLERA
 HARPOCRATES
 HARPON
 HARRE (HARON; ALQVERQVE)
 harriero *v.* HARRE
 hartapuerco *v.* CHAVACANO

HARTAR
 hartazga *v.* HARTO 2
 HARTO 1, 2
 hartura *v.* HARTO 2
 HASTA
 HASTIO (FASTIDIO)
 HATACA
 hatillo *v.* HATO
 HATO
 HAVA
 HAYA 8. HADROLLA
 HAZ 1, 2 (HACES; HAVA; FAZ)
 haza *v.* HAZ 2; QVIÑON
 hazaleja *v.* HAZ 1
 HAZAÑA
 hazañero *v.* HAZAÑA; HAZIENDA
 HAZCONA
 hazedor *v.* HAZIENDA
 hazendado *v.* HAZER 1;
 HAZIENDA
 hazendarse *v.* HAZIENDA
 hazendilla *v.* HAZIENDA
 hazendoso *v.* HAZER 1;
 HAZIENDA
 HAZER 1, 2 8. HACALEJAS
 HAZER 3, 8. HAZES
 hazera *v.* HAVA
 hazerico *v.* HAZ 1
 HAZES
 HAZEZILLA
 HAZIA
 HAZIENDA
 HAZINA
 hazinar *v.* HAZINA
 HE (HELE)
 HEBER
 HEBRA
 HEBRAISMO
 HEBREOS
 HEBRERO 1
 HEBRERO 2 (*err. por* HERRERO) 8.
 HERRON

HECHIZAR
 hechizera *v.* HECHIZAR
 hechizo *v.* HECHIZAR
 HECHO (HAZIENDA)
 HECHVRA (HAZIENDA)
 hedentina *v.* HEDOR
 HEDER
 hediondez *v.* HEDOR
 hediondo *v.* HEDOR
 HEDOR
 HELE
 HELEBORO
 HELGA
 heliogabolo *v.* HELEBORO
 heliotropia *v.* CHICORIA
 heliotropo *v.* GIRASOL
 HEMBRA
 HEMENCIA
 HENARES
 HENCHIMIENTO
 HENCHIR (HINCHAR)
 HENDEDVRA
 HENDER
 HENDERSE
 henil *v.* HENO
 HENO
 henogil *v.* CENOGIL; AHINOJARSE
 HENS
 henz *v.* HENS
 HEÑIR
 her *v.* HAZER 3
 hera *v.* ERA 1
 HERACLITO
 HERALDO
 HERBOLARIO
 HERCVLES
 HEREDAD
 heredamiento *v.* HEREDAD
 HEREDAR
 heredero *v.* HEREDAR; HEREDAD
 HEREGE (EREGE)
 heregia *v.* HEREGE; CISMA

herencia *v.* HEREDAR

HERESIARCA

HERIDA

HERIR

HERMAFRODITO (ANDROGENO;
EMAUFRODITO)hermandad *v.* HERMANOHERMANO 1, *s.* ERMAPHRODITO

HERMANO 2

hermano del trabajo *v.* GANAPANhermaphrodito *v.* ERMAPHRO-
DITO

HERMOSA

hermosear *v.* HERMOSA

HERMOSO

hermosura *v.* HERMOSAherodio *v.* GIRIFALTE

HERRADA

HERRADOR

HERRAR 1, 2, 3 (CLAVO)

HERREN

HERRENAL

HERREÑAL

HERRERIA

herrero *v.* HEBRERO 2

HERRON (DISCO)

HERRVMBRE

HERVATVM (ERVATV)

HERVIDERO

HERVIR

Hesperia *v.* ESPERIA

HESPERIDES

HESPERO

hetria *v.* BEHETRIA

HEVILLA

hevilleta *v.* HEVILLA

HEZ

HI

HIADOS

HIBERNIA

HIDALGO 1, 2 *s.* FIDALGO 3HILDAGO 3 (ESECVTORIA;
FIDALGO; OLLA)

HIDRA

HIDRIA

HIDROMANCIA

HIDROPESIA

HIEL 1, 2

hieme *v.* ESTIO

HIENA

HIENDA

HIERARCHIA

HIEROGLIFICO

HIERONIMO

HIEROSOLIMA

HIEROSOLIMITANO

HIERRO 1, 2, 3

HIGA *s.* HIGVERA (AOJAR)higadillo *v.* HIGADOHIGADO 1, *s.* HIERRO 3

HIGADO 2

HIGO (HIGVERA)

HIGVERA

HIJA *s.* HIJASTRO

HIJASTRO

HIJO 1, 2

HIJODALGO

hijuela *v.* HIJAhila *v.* AHILARSEhilachas *v.* HILAShilado *v.* HILANDERA

HILANDERA

HILAR

HILAS

hilaza *v.* HILANDERA

HILO

hilla hilloron *v.* FILANDRIAS

HIMNO

HINCAR

HINCHAR

hinchazon *v.* HINCHAR

HINOJO (CENOGIL)

HINOJO MARINO
 HINOJOS
 hinz *v.* HENS
 HIPERBOLE
 HIPO
 HIPOCRESIA
 HIPOCRITA
 HIPOMANES
 hipomarattho *v.* HINOJO
 HIPOSTASIS
 HIPPOCRENE
 HIPPOPOTAMO
 hisopo *v.* ISOPO
 HISTORIA
 historiado *v.* HISTORIA
 historiador *v.* HISTORIA
 HITA
 hita *v.* CHITA
 HITO 1, 2
 HIZNALOJA
 HIZNALLOZ
 HIZNALORAFE
 hoa *v.* HOLA
 HOBACHON
 HOBERO
 hocicar *v.* HOCICO
 HOCICO
 HOCINO (GARGANTA 2)
 hociquillo *v.* HOCICO
 HOGAR (FOGVERA)
 HOGAZA
 HOGVERA (FOGVERA)
 HOJA 1, 2
 hojaldrado *v.* HOJALDRE
 HOJALDRE
 HOJARASCA
 HOJVELAS
 HOLA
 HOLGADO
 HOLGANÇA
 HOLGAR
 holgazan *v.* HOLGADO

holgin *v.* HOLGADO
 holgura *v.* HOLGADO
 HOLOCAVSTO *s.* HOLLIN
 HOLLAR
 HOLLEJO (ARRAAX)
 HOLLIN (BRVXA)
 HOMARRACHE
 HOMBRE
 HOMBRO
 HOMECILLO
 HOMERO
 HOMICIDA
 HOMILIA
 HOMILIARIO
 HOMOVSIO
 HOMOVSISTA
 HONDA
 hondero *v.* HONDA
 HONDO (FONDO)
 HONDON
 HONDRADO
 HONDVRA
 HONDVRAS
 honestar *v.* HONESTO
 honestidad *v.* HONESTO
 HONESTO
 HONGO
 HONOR *s.* HONDRADO
 HONRA
 HONRADO
 HONRADOR
 HONRAR
 HONRAS
 HONRILLA
 hoque *v.* ALBOROQVE
 HORA (HORAS; DIA)
 HORACAR *s.* VRACO
 HORADADO
 HORADAR
 HORADO
 HORAS
 HORAS CANONICAS

HORCA
 horcadura *v.* BRAGADVRA
 HORCAJADA
 horcajadillas *v.* HORCAJADVRA
 HORCAJADVRA (CAVADVRA)
 HORCAJO
 horcon *v.* HORCA
 horgina *v.* BRVXA
 HORMA
 HORMIGA
 HORMIGON
 hormiguero *v.* HORMIGA
 HORMIGVILLO
 HORNACHOS *s.* HORNILLOS
 HORNACHVELOS
 HORNAZA
 HORNAZO
 HORNERA *s.* HORNO
 hornero *v.* HORNERA
 HORNILLO
 HORNILLOS
 HORNO (ALVNADO)
 HOROSCOPO
 HORQVILLA 1, 2, *s.* HORCAJO
 HORRENDO *s.* HORROR
 HERRERO
 HORRIDO *s.* HORRENDO
 HORRO
 HORROR
 HORTALIZA
 HORTELANO
 HORTERA
 HORTIGA
 HORTIGOSA
 HORTIGVILLA
 HOSANNA
 HOSCO
 HOSPEDAR
 hospederia *v.* HOSPEDAR
 hospicio *v.* HOSPEDAR; ESPITA-
 LERO
 HOSPITAL (ESPITAL)

hospital de San Anton, *v.* GAFO
 hospital de San Lazaro *v.* GAFO
 hospitalidad *v.* ESPITALERO
 hostel *v.* HOSPITAL
 hostelero *v.* HOSPITAL
 HOSTE
 hosteria *v.* HOSPITAL
 HOSTIA (HOSTIARIO)
 HOSTIARIO
 HOSTIGAR (FVSTA)
 hostigo *v.* FVSTA
 HOTO
 HOVERO
 HOYA *s.* HOJVELAS
 HOYO *s.* HOYA
 HOZ 1, 2 (HOCINO; GARGANTA 2)
 hozar *v.* HOCICO
 hozicar *v.* BESVCAR
 hozico *v.* LABEONES
 hozino *v.* HOZ 2
 hucha *v.* BVCHE
 HUCHOHO
 HVECO
 HVELGA (HOLGADO)
 HVELGAS
 HVELGO
 HVELVA
 HVELLA (HOLLAR)
 HVERCO
 HVESCA (GVESCA)
 huesped *v.* ESPITALERO;
 GVESPED; HOSPEDAR
 huespeda *v.* ESPITALERO
 HVESTE
 HVIR
 HVIRSE
 humanarse *v.* HVMANO
 humanidad *v.* HVMANO
 HVMANO
 humazo *v.* HVMO
 HVMEDAD
 HVMEDO (HVMEDAD)

humero *v.* HVMO
 humildad *v.* HVMILDE
 HVMILDE
 HVMILLACION
 HVMILLADERO
 humillarse *v.* HVMILDE
 humipeta *v.* GAVILAN
 HVMO
 HVNDIR
 HVNGRIA
 HVRACAN
 HVRAÑO
 HVRGAR
 hurgon *v.* HVRGAR
 hurgonero *v.* HVRGAR
 HVRON
 HVRRACA
 hurtadillo *v.* HVRTADO
 HVRTADO
 HVRTAR (HVRTO; HVRTADO)
 HVRTO (HVRTAR)
 HVSMAR
 HVSO
 huyda *v.* HVIRSE
 HVZIA *s.* HVCHOHO
 hydro *v.* HIDRA
 hydromeli *v.* ALOXA
 HYPERBOREO *s.* HIPERBOLE
 hypostatica *v.* HIPOSTASIS
 HYPOTHECA
 HYPOTHESIS

I (consonante = J)

I
 IABALAQVINTO
 IACA
 IACINTO
 IACO
 IACOB
 IACOBITA
 IACOBO
 IAEN

IAEZ
 iaharrar *v.* IA HARRO
 IA HARRO
 IALDE
 IALEA
 IALON
 IAMAS
 IAMBAS
 IAMON
 IANDVLILLA
 IANO
 IAQVE
 IAQVECA
 IAQVETA
 IARA
 IARCIAS
 IARDIN
 IARDINERO
 IARRA 1, 2, *s.* IARREAR
 iarrazo *v.* IARRA 1
 IARREAR
 iarretar *v.* IARRETE
 IARRETE
 IARRETERA 1, 2
 IARRO 1, 2 (IARREAR)
 IASAR
 IASPE
 iaspide *v.* IASPE
 IATANCIA
 iatancioso *v.* IATANCIA
 iatarse *v.* IATANCIA
 IAVLA
 iavalena *v.* IAVALI
 IAVALI
 IAYAN *s.* IA HARRO
 Iayme *v.* DIEGO
 IAZMIN
 IERVSALEM
 IESVITAS
 IESVS
 IO
 Ioan *v.* IVAN

IOFRE
 IOGE
 IOGLAR
 IOLITO
 IONIOLI
 IORDAN
 IORFE
 IORGE
 IORGINA (BRVXA)
 IORNADA
 IORNAL
 IORRO
 IOSEPH 1
 IOSEPH 2, s. IO
 IOSTRADO
 IOTA
 ioven *v.* IVVENTVD
 IOYA s. IOGLAR
 ioyante *v.* IOYA
 IOYEL s. IOYA
 ioyero *v.* IOYEL
 IVAN
 IVANETES
 iuba *v.* IVBON
 iubeteria *v.* IVBONCILLO
 iubetero *v.* IVBONCILLO
 IVBILAR
 IVBILEO
 IVBILO
 IVBON
 IVBONCILLO
 IVCAR
 iudaico *v.* IVDIO
 iudaismo *v.* IVDIO
 iudaizar *v.* IVDIO
 IVDAS
 iuderia *v.* IVDIO
 IVDICATVRA
 iudicial *v.* IVDICATVRA
 iudiguelo *v.* IVDIO
 IVDIO
 IVEGO 1, 2

IVEZ s. IVDIO
 IVGATON
 iuglar *v.* IVGATON
 IVGO
 IVGOSIDAD
 IVGVETE
 IVLEPE
 IVLIAN
 IVLIO
 iulios *v.* IVLIO
 IVLO
 IVMENTO
 IVNCADA
 IVNCIA
 IVNCO
 Iundulillo *v.* IVNVLA
 IVNIO
 IVNQVERA
 IVNQVILLO
 iunta *v.* IVNTAR
 IVNTAR
 IVNTERA
 IVNTVRA
 IVNVLA
 IVRA
 iuraderia *v.* IVRADO
 IVRADO
 IVRAMENTARSE
 IVRAMIENTO
 IVRAR
 IVRISCONSVLTO
 IVRISDICION
 IVRO
 IVSBARBA 1, s. IOTA
 IVSBARBA 2, s. IVRISDICIO N
 IVSTA
 IVSTICIA (IVSTO 1)
 IVSTICIERO
 iustificarse *v.* IVSTO 2
 IVSTO 1, 2
 IVVENAL s. IVVENTVD
 IVVENTVD s. IVSBARBA 1

IVYZIO *s.* IVGATON
 IVZGADO (IVZGAR 1)
 iuzgador *v.* IVDICATVRA
 IVZGAR 1, *s.* IVEZ
 IVZGAR 2

I (vocal, y consonante = Y)

I (*conj.*, = y), *s.* IVZGADO

IA

IACER

IANTAR

IAÑEZ

IBERIA

IBERNIA

IBIÇA

IBIS

Ibiza *v.* IBIÇA, IVIZA

ICONES

ICONOMACHIOS

iconomacos *v.* IMAGEN

IDA 1

IDA 2, *s.* IR

IDEA

IDIOMA

idiota *v.* IDIOMA

IDIOTISMO

idolatra *v.* IDOLO

idolatria *v.* IDOLO

IDOLO

IDRA

iduana *v.* ADVANA

IDVBEDA

IEDRA

IEGVA

IEGVADA

IEGVERIZO

ielme *v.* IELMO

IELMO

IELO

IEMA

IEPES

IERNO

IERTO

IERVA 1, 2

IERVO

IESO

IEZGOS

IGLESIA

IGNACIO

ignavia *v.* CALANDRIA

IGNOMINIA

ignominioso *v.* IGNOMINIA

IGNORANCIA

IGNORANTE

IGNORAR

IGVAL

IGVALADA

IGVALAR

I. H. S. *v.* CHRISTIANO

IJADA

IJADEAR

ijar *v.* IJADEAR

ilacion *v.* INFERIR

ILIBERIA

ILICITO

iluminacion *v.* ILVMINAR

iluminador *v.* ILVMINAR

ILVMINAR

ILVSION

ILVSTRAR

ILVSTRE 1, 2

ILLESCAS

IMAGEN

imaginable *v.* IMAGINACION

IMAGINACION

imaginar *v.* IMAGINACION

imaginario *v.* LABRAR

imaginativo *v.* IMAGINACION

IMAN (CALAMITA)

IMITAR

IMMORAL

IMPACIENCIA

IMPASSIBLE

- impavido *v.* PAVOR
 impedimento *v.* IMPEDIR
 IMPEDIR
 IMPELER
 imperar *v.* IMPERIO
 imperfeccion *v.* IMPERFETO
 IMPERFETO
 imperial *v.* IMPERIO;
 ALMIRANTE
 IMPERIO
 impertinencia *v.* IMPERTINENTE
 IMPERTINENTE
 impetra *v.* IMPETRAR
 IMPETRAR
 IMPETV
 IMPLACABLE
 IMPONER
 importancia *v.* IMPORTANTE
 IMPORTANTE
 IMPORTAR
 IMPORTVNAR
 importuno *v.* IMPORTVNAR
 IMPOSICION
 IMPOSSIBLE
 impotencia *v.* IMPOTENTE
 IMPOTENTE
 IMPRESSION
 impresso *v.* IMPRESSION
 impressor *v.* IMPRESSION
 imprimir *v.* IMPRESSION
 IMPRVENCIA
 impulso *v.* IMPELER
 IMPVTAR
 inabil *v.* ABIL
 inhabilitar *v.* ABIL
 inhabitable *v.* ABITAR
 INADVERTENCIA (ADVERTENCIA)
 inadvertido *v.* INADVERTENCIA;
 ADVERTENCIA
 incapaz *v.* CAPAZ
 incendiario *v.* ENCENDER
 incendio *v.* ENCENDER
 INCESTO *s.* INCONVENIENTE
 incestuoso *v.* INCESTO
 INCIENSO (ENCIENSO)
 INCIERTO
 incitador *v.* INCITAR
 incitamiento *v.* INCITAR
 INCITAR
 inclinacion *v.* INCLINAR
 INCLINAR
 INCLITO
 incluir *v.* INCLVSO 1
 inclusive *v.* INCLVSO 1
 INCLVSO 1, *s.* INCLITO
 INCLVSO 2
 incomodidad *v.* COMODO
 incomparable *v.* COMPARAR
 inconsideracion *v.* INCONSIDERADO
 INCONSIDERADO
 inconstancia *v.* CONSTANCIA;
 INCONSTANTE
 INCONSTANTE
 INCONTINENTI (CONTINENTE)
 INCONVENIENTE (CONVENIR)
 INCORDIO *s.* INADVERTENCIA
 (BVBAS)
 incorregible *v.* CORREGIR
 incredulidad *v.* INCREDVLO
 INCREDVLO
 increible *v.* INCREDVLO
 incurable *v.* CVRAR
 incurrir *v.* CVRSO
 indeclinable *v.* DECLINAR
 INDETERMINABLE (DETERMINAR)
 INDIA
 indiano *v.* INDIA
 indiciado *v.* INDICIO
 INDICIO
 INDICION
 INDIFERENTE
 indigestible *v.* INDIGESTO
 indigestion *v.* INDIGESTO

INDIGESTO 1, s. DIGESTOS
 INDIGESTO 2
 indignacion *v.* INDIGNARSE
 INDIGNAR
 INDIGNARSE
 indio *v.* INDIA
 INDISCRETO
 INDISOLVBLE
 indisposicion *v.* INDISPUESTO;
 DISPONER
 INDISPUESTO (DISPONER)
 INDIVISIBLE
 INDIVISO
 INDVCIR s. INDVSTRIADO
 INDVLGENCIA
 INDVSTRIA
 INDVSTRIADO
 industrial *v.* INDVSTRIADO
 industrioso *v.* INDVSTRIA
 INEFABLE
 INES
 INESTIMABLE (ESTIMAR)
 INEVITABLE
 infamar *v.* INFAMIA
 INFAME
 INFAMIA
 infanta *v.* INFANTE
 INFANTADO
 INFANTE (SOLDADO)
 infanteria *v.* INFANTE
 INFANZON
 infelicidad *v.* FELIZ
 INFERIOR
 inferioridad *v.* INFERIOR
 INFERIR
 infernal *v.* INFIERNO
 infernar *v.* INFIERNO
 INFICIONAR
 infidelidad *v.* INFIEL
 INFIEL
 INFIERNO
 INFIMO s. INFERIOR

INFINIDAD
 INFINTO
 inflamacion *v.* INFLAMAR
 INFLAMAR
 informacion *v.* INFORMAR;
 FORMAR
 informante *v.* INFORMAR;
 FORMAR
 INFORMAR (FORMAR)
 informe *v.* INFORMAR; FORMAR
 INFORTVNADO
 INFORTVNIO (FORTVNADO)
 infructuoso *v.* FRVTA
 INFVNDIR
 INFVSION
 infuso *v.* INFVNDIR
 INGALATERRA
 INGAS
 ingeniero *v.* INGENIO
 INGENIO
 ingenioso *v.* INGENIO
 ingerir *v.* ADOPTAR
 INGLE
 INGVINA
 INHABIL s. IMPVTAR (INABIL)
 inhabilidad *v.* INHABIL
 inhabilitar *v.* INHABIL;
 INABILITAR
 INHIESTA
 inhiesto *v.* INHIESTA
 inhumanidad *v.* INHVMANO
 INHVMANO
 iniquidad *v.* INIQVO
 INIQVO
 INIVRIA
 INIVRIAR
 injuriador *v.* INIVRIAR
 injurioso *v.* INIVRIAR
 injusticia *v.* INJVSTO
 INJVSTO
 INMOBIL
 INMORTAL

INMVNDICIA
 INMVNDO
 INMVNIDAD
 innovacion *v.* INNOVAR
 INNOVAR
 INNVMERABLE *s.* INTRODVCIR
 INOBEDIENTE
 INOCENCIA
 INOCENTE
 INOJOS
 INQVIETADOR
 inquietar *v.* INQVIETADOR
 INQVIETO
 inquietud *v.* INQVIETO
 INQVILINO
 INQVIRIDION (ENCHIRIDION)
 inquiridor *v.* INQVIRIR
 INQVIRIR
 inquisicion *v.* INQVIRIR
 inquisidor *v.* INQVIRIR
 INSACIABLE
 inscripcion *v.* ESCRIVANIA 2
 inserto *v.* ENXERTO
 INSIGNE
 INSIGNIA
 INSIPIENTE
 insolencia *v.* INSOLENTA
 INSOLENTA
 inspiracion *v.* INSPIRAR;
 ESPIRITVAL
 INSPIRAR (ESPIRITVAL)
 INSTANCIA
 INSTANTE
 INSTINTO
 INSTITVIR
 INSTITVTA
 instituto *v.* INSTRVIR
 instruccion *v.* INSTRVIR
 INSTRVIR
 INSTRVIMENTO
 INSVFRIBLE
 INSVFRIDO

INSVLSO
 INSVLTO
 integridad *v.* ENTERO
 INTENCION
 intensive *v.* INTESIVO
 intentar *v.* INTENCION
 intento *v.* INTENCION
 INTERCACIA
 INTERCADENCIAS
 INTERCALAR (BISIESTO)
 INTERCEDER
 intercesion *v.* INTERCEDER
 INTERESADO
 interesal *v.* INTERESE
 INTERESARSE
 INTERESE
 INTERIN
 INTERIOR
 INTERNO *s.* INTIMO
 INTERPRETAR
 INTERPRETE
 INTERPRETES
 INTERROGANTE
 INTERROGAR
 INTERROGATORIO
 INTERRVMPIR
 INTERVALO
 intervencion *v.* INTERVENIR
 INTERVENIR
 INTESIVO
 INTESTINOS *s.* INTERNO
 intimacion *v.* INTIMAR
 INTIMAR
 INTIMO
 INTITVLAR
 INTREPIDO
 INTRICADO
 intricar *v.* INTRICADO
 INTRINSECO
 introduccion *v.* INTRODVCIR;
 INTERRVMPIR
 INTRODVCIR

introductor *v.* INTRODVCIR
 introito *v.* INTRODVCIR
 intruso *v.* INTRODVCIR
 intybia *v.* ENDIBIA
 INVENCION (INVENTAR)
 invencionero *v.* INVENTAR
 INVENTAR
 INVENTARIAR
 INVENTARIO
 inventor *v.* INVENTAR
 invernadero *v.* INVERNAR
 INVERNAR *s.* INVIERNO
 invernizo *v.* INVERNAR
 INVIDIA
 INVIDIAR
 INVIERNO
 inviolable *v.* VIOLAR
 INVISIBLE
 invocacion *v.* INVOCAR
 INVOCAR
 IO
 ipocras *v.* NIEVE
 IPOCRITA
 IR
 IRA
 IRACVNDIA
 IRACVNDIO (IRACVNDIA)
 IRINEO
 iris *v.* LIRIO
 IRLANDA (HIBERNIA)
 irlandes *v.* IRLANDA
 IRONIA
 IRREGVLAR
 irregularidad *v.* IRREGVLAR
 irremisible *v.* REMITIR
 IRREPARABLE
 irrevocable *v.* REVOCAR
 ISABEL
 ISAGOGE
 Iscariotes *v.* ESCARIOTE
 isiaco *v.* ISIS
 ISIDORO

Isidro *v.* ISIDORO
 ISIS
 ISLA
 isleno *v.* ISLA
 ISOPILLO
 ISOPO 1, 2
 ISRAEL
 ISRAELITA
 ITALIA
 ITALIANO
 ITALICA
 ITALO
 ITEM
 ITERICIA
 ITINERARIO
 IVGADA
 IVGO
 IVIZA *s.* IVNQVERA
 iungir *v.* VÑIR
 IVNQVE
 IVNQVERA
 IVNTA 1, 2
 iuntar *v.* IVNTA 1
 iuntera *v.* IVNTA 2
 IVSO
 IZA
 IZAGA
 IZNALLOZ (HIZNALLOZ)
 IZNATORAPH
 IZQVIERDO (EZQVERRA)

J (véase también I)

jacerino *v.* COTA 1
 jalea *v.* CIDRA
 jambas *v.* LINTEL
 jaqueta *v.* IACO
 jarrear *v.* ESCANCIAR
 jarretera *v.* CENOGIL
 jazer *v.* HOLGAR
 jo *v.* HARRE
 jogar *v.* HOLGAR

jorgin *v.* BRVXA
 jornada *v.* DIETA 3
 jostrado *v.* VIROTE 1
 jubileo *v.* CVERNO
 judiguelo *v.* FASOLES;
 FRISOLES; PESOLES
 juego troyano *v.* CAÑA
 jugarse *v.* IVEGO 2
 jumento *v.* ASNO
 justicia *v.* IVSTICIERO

K

kalendarias *v.* ANALES
 KYRIE ELEYSON

L

L
 LABARO (ESTANDARTE)
 LABEONES
 LABERINTO
 labia *v.* LABEONES
 LABIO (LABEONES; BOÇAL)
 LABOR
 LABRADOR (LABOR)
 labradora *v.* LABRADOR
 labrança *v.* LABOR
 labrante *v.* LABRAR
 LABRAR (LABOR)
 LACAYO (ESPVELA)
 lacerado *v.* LACERIA 1, 2
 LACERIA 1
 LACERIA 2, *s.* LAZARO
 LACRA
 LACRE
 LADERA
 LADILLAS
 LADINO (LATIN; GRECIZAR)
 LADO
 LADRAR
 ladrado *v.* LADRAR
 LADRILLADO

ladrillazo *v.* LADRILLADO
 ladrillejo *v.* LADRILLADO
 LADRILLO
 LADRON
 ladroncillo *v.* LADRON
 LADRONERA (LADRON; ALCAN-
 CIA; BVCHE)
 LADRONICIO
 LAGAÑA
 LAGAÑOSO
 LAGAR
 lagarejo *v.* LAGAR
 LAGARTADO
 LAGARTERO
 LAGARTIJA
 LAGARTO
 lagerto *v.* LAGARTO
 LAGO
 LAGOS
 LAGRIMA 1, 2
 LAGRIMAL
 LAGVNA (LAGO; ESTANCAR)
 LAGVNAJOS
 LAICO
 LAMEDOR 1
 LAMEDOR 2, *s.* LAMER
 LAMEGO
 lamentable *v.* LAMENTAR
 lamentacion *v.* LAMENTAR
 LAMENTAR
 lamento *v.* LAMENTAR
 LAMER
 LAMIAS (BRVXA)
 LAMINA
 LAMPARA (LAMPARAS)
 LAMPARAS
 lamparero *v.* LAMPARAS
 lamparilla *v.* LAMPARAS;
 CANDELILLA
 LAMPARON
 LAMPAZO
 LAMPIÑO

LAMPREA
 LAMPVGA
 LANA
 LANÇA (CAVALLERIZO)
 LANÇADA
 LANÇADERA
 LANÇAR (LANÇA)
 LANCE
 lancera *v.* ALANCEARSE; ASTA
 LANCETA
 LANCILLA
 LANCISCOT S. LANGOSTIN
 lançon *v.* ALANCEARSE
 lançuela *v.* LANCILLA
 lanchazo *v.* LANCHE
 LANCHE
 LANDRE
 LANDRECILLA (SECA)
 LANGARVTO
 LANGOSTA
 LANGOSTIN
 LANILLA
 LANTERNA
 lanudo *v.* LANILLA
 LAPISLAZVLI
 LAPITAS
 LARDAR (GORDO)
 lardero *v.* LARDAR
 LARDO
 LARES
 largaria *v.* LARGO
 LARGO
 LASAÑA
 LASCIVIA
 lascivo *v.* LASCIVIA
 LASTAR
 lastima *v.* LASTIMAR
 LASTIMAR
 lasto *v.* LASTAR
 LASTRE
 lastron *v.* LASTRE
 LATERANO

LATIGAZO
 LATIGO (LATIGAZO)
 LATIN
 latinidad *v.* LATIN
 LATON
 LATRIA (DVLIA)
 LATRINA
 LAVD (CORCOBA)
 LAVDE
 LAVREADO
 laurear *v.* LAVREADO
 LAVREL
 lavadero *v.* LAVAR
 LAVAJOS
 lavança *v.* LAVAR
 LAVANCO
 lavandera *v.* LAVAR
 lavandulla *v.* ESPLIEGO
 LAVAR
 lavatorio *v.* LAVAR
 LAZARO
 lazdrado *v.* LACERIA 2
 LAZO
 LEAL
 lealtad *v.* LEAL
 LEBECHE
 lebrada *v.* LIEBRE
 LEBREL
 lebron *v.* LIEBRE
 leccion *v.* LEER
 lectica *v.* CVBA
 lector *v.* LEER
 lechal *v.* LECHE
 LECHE (LECHO)
 LECHE TREZNA S. LECHIGADA
 lechecilla *v.* LECHE
 LECHIGADA
 LECHO
 LECHON
 LECHVGA
 LECHVGILLAS
 LECHVGVINO

LECHVZA
 LEDESMA
 LEDO
 LEER
 LEGADO
 LEGAJO
 LEGAL
 legia *v.* ENRVBIAR
 legible *v.* LEER
 LEGION
 LEGISLADOR
 LEGISTA
 LEGITIMA
 LEGITIMAR
 LEGITIMO
 LEGO
 LEGON
 legoncillo *v.* LEGON
 legra *v.* LEGRAR
 LEGRAR
 LEGVA
 LEGVMBRE
 lenceria *v.* LENCERO
 LENCERO 1, *s.* LEGISLADOR
 LENCERO 2, *s.* LIENÇO
 LENGVA 1, 2
 lengua de ciervo *v.* ESCOLO-
 PENDRA
 LENGVADO
 LENGVAGE (LENGVA)
 LENGVETA
 LENTEJA
 LENTISCO
 LENTVLOS *s.* LANCISCOT
 leña *v.* LEÑO
 leñador *v.* LEÑO
 LEÑO
 LEOCADIA
 LEON (CASTILLO)
 LEON 1, 2
 LEONADO
 LEONERA

LEONERO
 leones *v.* LEON 1
 LEpra (GAFO)
 leproso *v.* LEpra; GAFO
 LERDO
 LERIDA
 LERNA
 LETANIA
 LETARGO
 LETRA
 letrado *v.* LETRA
 letrero *v.* LETRA
 letron *v.* LETRA
 LETVARIO
 letura *v.* LEER
 leuchena *v.* CASTAÑA
 LEVA
 LEVADA
 LEVADVRA
 LEVANTAL
 LEVANTAR
 LEVANTE
 LEVE
 LEVIATAN
 leviraya *v.* RAYA 2
 LEXIA
 LEXICON
 LEXOS
 LEY (LEGISLADOR)
 LEZVCA
 LIA 1, 2
 liar *v.* LIA
 LIBELO
 LIBERAL
 liberalidad *v.* LIBERAL
 LIBERTAD *s.* LIBRE
 LIBERTAR *s.* LIBERTAD
 libertino *v.* LIBERTAR
 liberto *v.* LIBERTAR
 LIBITINA
 LIBRA
 LIBRAMIENTO

librança *v.* LIBRAR

LIBRAR

LIBRE (LIBERTAD)

LIBREA

libreria *v.* LIBRERO

LIBRERO *s.* LIBRO

libreta *v.* LIBRA

librete *v.* BRASA

LIBRILLO

LEBRIXA

LIBRO

libro de caballeria *v.* FÁBVLA

LICENCIA (LICENCIADO)

LICENCIADO

licenciar *v.* LICENCIADO

licencioso *v.* LICENCIADO

LICITO

LICOR

lichen *v.* ASNO

LID

lidiador *v.* LID

lidar *v.* LID

liebraston *v.* LIEBRE

LIEBRE

LIENÇO (FAÇOLETO; MAPA)

LIENDRE

LIENTO

LIGA (CENOGIL; ALIADOS)

ligadura *v.* LIGAR

ligagamba *v.* LIGA; GAMBA;

CENOGIL; AHINOJARSE

ligallo *v.* MESTA

LIGAR

ligereza *v.* LIGERO

LIGERO

ligeruelo *v.* LIGERO

ligula *v.* ESPATVLA

LILIO

LIMA 1, 2

LIMA 3, 4, *s.* LIMON

limadura *v.* LIMA 1

limar *v.* LIMA 1

LIMBO

limeta *v.* LIMON

limitacion *v.* LIMITE

limitar *v.* LIMITE

LIMITE

LIMO

LIMON

limonado *v.* LIMON

LIMOSNA

limosnero *v.* LIMOSNA

limoso *v.* LIMO

LIMPIADERA

LIMPIAR (LIMPIO)

limpieza *v.* LIMPIAR

LIMPIO

linaça *v.* GOMA; LINAZA

LINAGE (HERALDO)

LINAJVDO

LINALVE

linar *v.* LINAZA

LINARES

LINAZA *s.* LINO (LINAÇA)

LINCE

LINDE (TERMINO)

LINDERA (TERMINO; LINDE)

LINDO (ALIÑAR; FINO)

LINEA

LINO

LINTEL

linueso *v.* LINAZA

LIO 1, *s.* LIA

LIO 2

LIPVZCOA

liquidar *v.* LIQVIDO

LIQVIDO

LIRA 1, 2 (CITARA; DELIRAR)

LIRIA

LIRIO (LILIO)

LIRON

LISBOA

LISIAR

LISO

lisongear *v.* LISONJA
 LISONGERO
 LISONJA (LISONGERO)
 LISTA
 listado *v.* LISTA
 LISTO
 liston *v.* LISTA
 LISVRA
 LITARGIRIO (ALMARTAGA)
 lithagiro *v.* ALMARTAGA
 litigante *v.* LID
 LITIGAR (LID)
 litigio *v.* LID
 LITVRGIA
 LIVIANDAD
 LIVIANO (BOFES)
 LIVIANOS
 LIXA
 LIZA
 LIZOS
 LOA
 loable *v.* LOA
 loar *v.* LOA
 LOARRE
 LOBA 1, 2, 3 (LOBADO;
 BASTARDO)
 LOBADO
 LOBANILLO (TVFO)
 LOBARRO
 lobo *v.* LOBA 1
 lobo cervical *v.* LINCE
 LOBREGAT
 LOBREGO
 LOCA *s.* LOCVTORIO
 LOCAL
 loçania *v.* LOÇANO
 LOÇANO
 LOCO
 LOCOBIN
 LOCVRA
 LOCVTORIO
 LODAÇAL

LODO
 LOGICA
 logico *v.* LOGICA
 LOGRARSE
 LOGRERO (VSVRA)
 LOGRO (LOGRERO; VSVRA)
 LOGROÑO
 loma *v.* LOMO; CERRO
 LOMBARDA
 LOMBRIGVERA
 LOMBRIZ
 lomillo *v.* LOMO
 LOMO
 LONGANIZA
 LONGINOS
 LONJA
 LOOR (LOA)
 LOPE
 loquear *v.* LOCVRA
 LORA
 LORCA
 LORICA (COTA 1)
 LOSA 1, 2
 losilla *v.* LOSA 1
 loton *v.* ALMEZ
 lotos *v.* ALMEZ
 LOXA
 LVBRICAN (CREPVSCVLO)
 LVCERO *s.* LVZ
 LVCHA
 LVCHENTE
 LVEGO
 LVENGO
 lueñe *v.* LVENGO
 LVGAR
 LVGILLO *s.* LVZIERNAGA
 LVGO
 LVIS
 Luisa *v.* LVIS
 LVMBRAL
 lumbraria *v.* ALVMBRAR
 LVMBRE (ALVMBRAR)

LVMBRERA (ALVMBRAR)
 LVMINARIAS (ALVMBRAR)
 LVNA
 LVNADA (ANCA)
 LVNAR
 LVNARIO
 lunatico *v.* LVNA
 LVNES
 LVPIA
 lupino *v.* LVPIA
 LVQVETE
 LVSITANIA
 lustrator *v.* RONDA
 LVSTRE
 LVSTRO
 LVTO
 LVZ (CREPVSCVLO)
 LVZIERNAGA *s.* LVCERO
 LYCAON *s.* LLOVIZNAR
 lycisca *v.* MASTIN

Ll

ll *v.* L
 LLAGA
 LLAMA
 LLAMAMIENTO
 LLAMAR
 llamarada *v.* LLAMA
 llaneza *v.* LLANO
 LLANO
 LLANTA
 LLANTAS
 LLANTEN
 LLANTO
 LLARES (MORILLOS; *cf.* LARES)
 LLAVE
 llave dorada *v.* DORAR
 LLAVERO
 lleco, -a, *v.* LLECOS
 LLECOS
 LLEGAR
 llenar *v.* LLENO

LLENO
 lleudarse *v.* LEVADVRA
 lleudo *v.* LEVADVRA; CENCEÑO
 llevadero *v.* LLEVAR
 LLEVAR
 lloradera *v.* LLORAR
 lloraduelos *v.* LLORAR
 LLORAR
 llovedizo *v.* LLOVIZNAR
 LLOVER
 LLOVIZNAR
 lluvia *v.* LLOVER
 lluvioso *v.* LLOVIZNAR

M

M

MAÇA 1, 2 (CEPA)
 MACABEOS
 MAÇACOTE
 maçada *v.* MAÇA 2
 MAÇAPAN
 MACAR
 MACARIO
 MACARRONEA
 MACARRONES
 macarrónico *v.* MACARRONEA
 maceador *v.* MAÇA 2
 MACEAR
 macero *v.* MAÇA 2
 macizo *v.* MAÇO 1
 MAÇO 1, 2
 MAÇORCA
 MAÇORRAL
 MACROBIO
 MACVLA *s.* MAGVER
 MACHACAR 1
 MACHACAR 2, *s.* MACHO
 MACHAMARTILLO
 MACHETE
 MACHO (HEMBRA)
 MACHVCA
 machucar *v.* MACHACAR 2

MADALENA
 MADERA
 maderada *v.* MADERA
 maderamiento *v.* MADERA
 MADERAR
 maderero *v.* MADERA
 MADEXA
 MADRASTRA *s.* MADRINA
 MADRE 1, 2, 3, 4 (HIJA)
 MADRESELVA
 MADRID
 MADRIGAL (MANDRA)
 MADRIGVERA
 MADRINA (COMADRE)
 MADRONO
 madroño *v.* MADRONO
 madrugada *v.* MADRVGAR
 madrugador *v.* MADRVGAR
 MADRVGAR
 madurar *v.* MADVRO
 madurez *v.* MADVRO
 MADVRO
 maestra *v.* MAESTRO
 MAESTRE
 maestreracional *v.* CONTADOR 1
 MAESTRESALA
 MAESTRESCVELA
 maestri *v.* MAESTRO
 MAESTRO 1, 2, 3, 4, 5
 (VERDVGO 2)
 MAGACEN
 MAGANTO
 MAGARÇA
 MAGESTAD
 MAGISTERIO *s.* MAGISTRAL
 MAGISTRAL *s.* MAESTRO 1
 magnanimidad *v.* ANIMAL
 MAGNANIMO (ANIMAL)
 MAGNIFICENCIA
 MAGNIFICO
 MAGNO
 MAGO

MAGRO
 MAGVER
 MAHOMA
 MAIMONETA *s.* MAYORANA
 maiveta *v.* FRESAS
 MAIZ
 MAJADA
 MAJADERILLOS
 MAJADERO
 majaderuelo *v.* BOLA; PALILLOS
 MAJAR
 MAJVELA
 MAJVELO
 MAL (GOTACORAL; AOJAR)
 MALACHIAS
 MALAGA
 malcozinado *v.* COZINA
 MALDAD
 MALDEZIR
 maleficio *v.* MALEFICO
 MALEFICO
 MALETA
 maleza *v.* MALINO; BREÑA
 Malfetria *s.* MALSIN
 MALICIA
 malicioso *v.* MALICIA
 MALINO
 malmaridada *v.* MARIDO
 malmesor *v.* ALBACEA
 malmirado *v.* MIRAR
 MALO *s.* MAL
 malograrse *v.* LOGRARSE
 MALQISTO
 MALSIN (DELATAR)
 malsinar *v.* MALSIN
 MALTA
 MALTRATAR
 MALVCO
 MALVA
 MALVADO
 MALVASIA (CANDIA)
 MALVAVISCO (DIALTEA)

MALLA *s.* MALETA (COTA 1)
 MALLORCA
 mallorquin *v.* MALLORCA
 MAMANTE
 mamanton *v.* MAMON;
 AMAMANTAR
 MAMAR
 MAMELVCOS
 MAMON
 MAMONAR 1, 2
 MAMOTRETO
 mamparo *v.* MANECILLAS
 MAMPESADA *s.* MANECILLAS
 MRMPOSTERIA 3, *s.* MAMPESADA
 MAMPOSTERIA 1, *s.* MAMOTRETO
 MAMPOSTERIA 2 *s.* SILLAR
 MAMPOSTEROS
 mampuesto *v.* MAMPOSTERIA
 man *v.* MANECILLAS
 MANA (MIEL)
 MANADA 1, 2 (BRANCADA)
 manantial *v.* MANAR
 MANAR
 MANÇANA
 MANÇANARES
 MANÇANILLA (AMARANTO)
 MANÇANILLAS
 MANÇANO
 MANCARSE
 MANCEBA
 MANCEBIA
 MANCEBO
 MANCERA (ESTEBA)
 MANCILLA
 MANCO
 MANCHA 1, 2, 3
 manchar *v.* MANCHA 1
 MANCHEGO
 manda *v.* MANDAR
 MANDADERA
 mandado *v.* MANDAR
 MANDAMIENTO

MANDAR
 MANDATO
 MANDIL 1, *s.* MANDAMIENTO
 MANDIL 2, 3
 MANDILETE *s.* MANDADERA
 mandoble *v.* MANECILLAS
 mandon *v.* MANDAR
 MANDRA
 MANDRAGORA
 MANDRON
 MANEAR *s.* MANIATAR
 (MANEOTA)
 MANECILLAS *s.* MANO
 manejar *v.* MANEJO
 MANEOTA
 MANERA 1, 2
 MANESTRAL (ARTERO 1)
 MANGA 1, 2, 3
 MANGANILLA
 mangeta *v.* CRISTAL
 MANGO
 MANGONADA
 mangorrero *v.* MANGO
 manguillo *v.* MANGA 3
 maniacó *v.* MANOTADA;
 AMAÑARSE
 maniatar *v.* MANIRROEO
 MANIDA
 MANIFESTACION
 MANIFESTAR
 MANIFIESTO
 MANIJA (CORAL)
 MANILLAS (AXORCAS)
 MANIPVLO
 MANIQVEOS
 MANIRROTO *s.* MANOTADA
 (MANECILLAS)
 MANIRSE
 MANJAR (BLANCA)
 MANLIEVE
 MANNA *s.* MAMPOSTEROS
 MANO

MANOJO (HAZEZILLO)
 MANOPLA
 MANOTADA
 manquadra *v.* IVRAMIENTO
 manquedad *v.* MANCARSE
 MANRIQUE
 MANSÉDVMBRE
 MANSO
 mansuefacto *v.* MANSO
 mansueto *v.* MANSO
 MANTA 1, 2
 MANTECA 1, 2
 mantecon *v.* MANTECA 2
 MANTELES
 MANTELETE *s.* MANTELLINA
 MANTELLINA
 MATENER 1, 2
 MANTENIMIENTO
 manteo *v.* MANTO 1
 MANTILLAS
 MANTINIENTE (MANECILLAS)
 MANTO 1, 2
 manton *v.* MANTA 2
 MANVAL
 MANVMISION
 MANVTENCION
 MANZER 1, *s.* MANCEBIA
 MANZER 2
 MANZERA 1, 2
 MANZILLA
 MAÑA
 MAÑANA 1, 2
 MAÑERA
 mañeruela *v.* HACĀ
 mañoso *v.* MAÑA
 MAPA
 MAQVEDA
 MAQVI
 MAQVILA
 maquilero *v.* MAQVILA
 MAQVINA
 maquinar *v.* MAQVINA

MAR
 MARAÑA
 MARAÑON
 MARAVEDI
 MARAVILLA
 maravillarse *v.* MARAVILLA
 MARBELLA
 MARCA 1, 2, 3
 MARÇALAGA
 marcar *v.* MARCA 3
 MARCO (MARCA 3)
 MARÇO
 MARCHALES
 MARCHAR
 MARCHENA
 MARCHITARSE
 MAREA 1, *s.* MAR
 MAREA 2
 marear *v.* MARINERO
 MAREARSE
 MARETA
 MARFIL (ELEFANTE)
 MARFODIO
 MARGARITA (ALJOFAR; ELENCO)
 MARGARITA
 MARGEN
 MARGINAR
 MARHOJO
 MARIA
 MARICON
 maridillo *v.* BRASA
 MARIDO
 marimacho *v.* MARICON
 marimaricas *v.* MARICON
 MARIN *s.* MARINERO
 MARINA
 MARINERO *s.* MAREARSE
 marino *v.* MARINERO
 MARIOLO
 MARIPOSA
 MARISCAL
 mariscas *v.* HIGO

marítimo *v.* MARINERO

MARJAL

MARLOTA

MARMOL

MAROMA (ESPARTO)

MARQUES (MARCA 1)

MARQUESADO

MARQUESITA

MARQUESOTA

martana *v.* MARRANO

MARRANO

MARRAR

MARRAS

MARRIDO

marito *v.* MARRAR; AMARRASmarion *v.* MARRAR

MARRVIO

MARTA 1, 2

MARTE

MARTILLO

MARTIN

MARTINA

MARTINETE

martiniega *v.* MARÇALAGA

MARTIROLOGIO

MARTOS

MAS

MASA (MASAR)

MASAR

MASCAR

MASCARA 1, 2 (CARATVLA)

mascarilla *v.* ENMASCARADOSMASECORAL *s.* MASCARA 2;

(IVEGO 2)

masegicomar *v.* IVEGO 2

MASICORAL (CORAL)

MASTIL

MASTIN

MASTRANTO

MASTRATES

MASTRÉSALA

MASTVERÇO

MATA

MATACHIN

MATADERO

MATADOR

matadura *v.* MATAR 2matafaluga *v.* MATALAVGA

MATALAVGA (ANIS)

MATALOTAGE

MATANÇA

MATAR 1, 2, 3 (MATASIETE)

matarazo *v.* COLCHON

MATASIETE (SIETE)

MATE

MATEMATICA

MATERIA (MATERIAS)

MATERIAL

MATERIALIS

MATERIAS

MATERNAL *s.* MADRASTRA

MATIZ

MATIZAR

MATORRAL *s.* MATA

MATRACA (TRATO 2)

matraquista *v.* MATRACA

MATRICVLA

matricularse *v.* MATRICVLA

MATRIMONIAL

MATRIMONIO

MATRIZ 1, *s.* MATERNAL

MATRIZ 2

MATRONA

MAVLLAR

mausoleo *v.* ARTEMISAmaxa *v.* GRANZASmaxagranças *v.* GRANZASmaxcara *v.* ENMASCARADOS

MAXCARAQVE

MAXILLA

MAXMORDON

MAYA *s.* MAYOmayacantha *v.* IVSBARBA 2MAYO *s.* MAHOMA

MAYOR
 MAYORAL
 MAYORANA s. MAYORDOMO;
 (ALMORADVX)
 MAYORAZGO
 mayordomia v. MAYORDOMO
 MAYORDOMO
 maytinante v. MAYTINES
 MAYTINES
 MAZA
 MAZACOTE
 mazagatos v. GATEAR
 MAZARI
 mazero v. BEDEL
 MAZIZO
 MAZMORRA
 maznar v. CAPAR
 MAZORCA
 MEAJA (CAPILLA 1)
 MEAR
 MECANICO
 MECER
 MECHA
 MECHAR
 MECHERO
 MECHINALES
 MECHOACAN
 MEDALLA (EMBLEMA)
 MEDELLIN
 MEDIANA
 MEDIANERO
 MEDIANIA
 mediano v. MEDIANA
 MEDIAR
 MEDIAS
 MEDICINA (MELECINA)
 medicinable v. MEDICINA
 medicinal v. MEDICINA
 MEDICO (CIRVJANO; FISICO)
 MEDIDA
 MEDINA 1, 2, 3
 MEDIO 1, 2 s. MEDICINA

MEDIOCRIDAD (MEDIANIA)
 MEDIR
 MEDITERRANEO
 MEDIRSE
 MEDRANO
 MEDRAR
 MEDVLA
 MEGA
 MEGERA
 MEJOR
 mejora v. MEJORAR
 MEJORADA
 MEJORANA
 MEJORAR
 melado v. MELOSO
 MELANCOLIA
 melancolico v. MELANCOLIA
 melancolizarse v. MELANCOLIA
 melanthion v. AXENVZ
 melarchia v. MELANCOLIA
 melarchico v. MELANCOLIA
 MELCÓCHA
 melcochero v. MELCOCHA
 MELCHISEDEC
 MELECINA (CLYSTEL)
 MELENA (CABELLO)
 MELENDEZ
 MELIBEA
 MELIFLVO (MELOSO)
 MELINDRE
 melindroso v. MELINDRE
 meliteo v. MALTA
 MELOCOTON
 MELODIA
 MELON (ESCRITO)
 MELONAR
 MELOSO s. MIEL
 MELLA
 mellar v. MELLA
 MELLIZAS
 MELLIZOS (GEMELOS)
 membrar v. REMEMBRAR

MEMBRARSE
 MEMBRILLAR
 MEMBRILLO (CODON)
 MEMBRVDO 1
 MEMBRVDO 2, s. MIEMBRO
 MEMORABLE
 MEMORIA (MEMORIOSO)
 MEMORIAL
 MEMORIOSO
 MENAGE
 MENCIA
 MENCION
 MENDICANTES
 MENDIGAR
 MENDIGO
 mendiguez *v.* MENDIGAR
 MENDO
 MENDOÇA
 MENDRVGO
 MENEAR
 MENEO
 MENESTER
 menesteroso *v.* MENESTER
 MENESTRA
 MENESTRAL (MANESTRAL)
 MENESTRIL
 MENGALA
 MENGVA
 menguado *v.* MENGVANTE
 MENGVANTE
 MENGVAR
 menina *v.* FATIMA
 MENINO
 MENIQVE
 MENJVI
 MENOR
 Menorca *v.* MALLORCA
 MENOS
 MENSAGE
 mensageria *v.* MENSAGE
 MENSAGERO
 MENTAL

MENTAR
 MENTE
 MENTECATO
 MENTIR
 mentiroso *v.* MENTIR
 menudear *v.* MENVDO
 menudillos *v.* MENVDO
 MENVDO
 MEOLLO
 mercadante *v.* MERCAR
 mercader *v.* MERCAR
 mercado *v.* MERCAR; FERIA 1
 mercaduria *v.* MERCAR
 mercancía *v.* MERCAR
 mercante *v.* MERCAR
 MERCAR
 MERCED 1, 2 (DIOS; GVEVO)
 mercenario *v.* MERCED
 mercería *v.* MERCERO
 MERCERO
 MERCVRIAL
 MERCVRIALES
 MERCVRIO
 merchan *v.* MERCAR
 MERECER
 merecido *v.* MERECER
 MERENDAR
 MERETRIZ
 MERIDA
 merienda *v.* MERENDAR
 MERINA
 MERINA s. MIRA
 MERINDAD *v.* MERINO
 MERINO
 MERLVZA (FRESCO)
 MERMA
 MERMELADA
 MEÑO
 MES
 MESA
 mesa franca *v.* BANQVETE
 mesada *v.* MES

MESAR
 MESEGVERO *s.* MIES
 MESIAS
 MESMO
 MESNADA (*AMESNADORES*)
 MESON
 MESOPOTAMIA
 MESSANA *s.* MESA
 MESTA
 mestengo *v.* MOSTRENCO
 MESTIZO
 MESTO
 MESVRA
 metafora *v.* METAPHORA
 METAMORPHOSIS
 METANEA
 METAPHORA
 METATHESIS
 METEOROS
 METER
 METODO
 METONIMIA
 METOPAS
 metrificar *v.* METRO
 METRO
 METROPOLI
 metropolitano *v.* METROPOLI
 MEXICO
 mexilla *v.* MAXILLA
 MEZCLA
 MEZCLAR
 MEZQVINO
 MEZQVITA
 mezzana *v.* MESSANA
 mezzena *v.* MESSANA
 miacantha *v.* BRVSCO;
 ESPARRAGO
 MICAEL
 micer *v.* DON
 MICO
 MIDAS
 MIEDO

MIEL
 MIELGA
 MIEMBRO
 MIENTES
 MIERA
 MIERCOLES
 MIES
 miezgado *v.* FRESAS
 MIGA
 MIGAJA
 MIGAJON
 migrana *v.* AXAQVECA
 MIGVEL
 MIJO
 MIL 1, 2
 MIL EN RAMA
 MILAGRO
 MILAGROSO
 MILAN
 milanés *v.* MILAN
 MILANO (*GAVILAN*)
 MILANOS
 MILICIA
 MILITANTE
 MILITAR
 MILLA
 MILLAR
 MILLON
 MIMBRE
 mimbrera *v.* MIMBRE
 MIMO
 MINA (*MINERO*)
 MINERO
 MINERVA
 MINIMO
 MINISTERIO
 MINISTRO
 MINOTAVRO
 MINVCIAS
 MINVTOS
 MIÑERVELOS
 MIÑO

MIO	mochacherria <i>v.</i> MOCHACHO
MIRA <i>s.</i> MIRADOR	MOCHACHO
MIRABOLANOS	MOCHILA (CAPA)
MIRADOR <i>s.</i> MIRAR	mochilero <i>v.</i> MOCHILA
MIRAFLORES	MOCHIN (BOCHIN)
MIRAMAMOLIN	MOCHO
miramiento <i>v.</i> MIRAR	MOCHVELO
MIRANDA	MODELO
MIRANDILLA	MODERAR
MIRAR	MODERNO
MIRLA	MODO
MIRLADO	MODORRA (MODORRO; LETARGO)
MIRRA	modorrilla <i>v.</i> MODORRO
misa <i>v.</i> MISSA	MODORRO
miserable <i>v.</i> MISERIA	MOFA
MISERAICAS (VENAS)	MOFLETES
MISERIA 1, 2	MOGATE
MISERICORDIA	mogato <i>v.</i> MOGATE
misericordioso <i>v.</i> MISERICORDIA	mogigato <i>v.</i> GATEAR
misero <i>v.</i> MISERIA	MOGOLLON
MISSA	MOHARRACHE
MISSAL <i>s.</i> MIRRA	MOHATRA
missario <i>v.</i> MISSAL	mohatrero <i>v.</i> MOHATRA
missero <i>v.</i> MISSAL	MOHEDA
MISTERIO	mohinillo <i>v.</i> MOHINO
misterioso <i>v.</i> MISTERIO	MOHINO (AMOHINARSE)
MISTICO	MOHO
MISTVRA	MOJAR
MITICAL	MOJON (CARBON)
MITRA (COROÇA)	MOJONERA
MITRIDATES	MOLAMATRIZ
mitridatico <i>v.</i> ANTIDOTO	MOLDE
MITRIDATO	moledor <i>v.</i> MVELAS
MIZ (EXE 2; GATA; HARRE)	MOLER (MVELAS)
mizigato <i>v.</i> GATEAR	MOLESTAR
moça <i>v.</i> MOÇO	molesto <i>v.</i> MOLESTAR
MOCADERO (FAÇOLETO)	molido <i>v.</i> MOLIMINETO
MOÇARAVE	molienda <i>v.</i> MOLINERO
mocedad <i>v.</i> MOÇO	MOLIENTE <i>s.</i> MOLLETA
MOCO (ESCORIA)	MOLIMIENTO
MOÇO	MOLINERO
mocoso <i>v.</i> MOCO	MOLINO (BOLTEAR)

MOLLARES
 MOLLEJA
 MOLLENTAR
 MOLLERA
 MOLLETA
 MOLLETE
 MOMARRACHE
 momentaneo *v.* MOMENTO
 MOMENTO
 MOMIA
 MOMO
 MONA
 MONACILLO (CLERIZON)
 MONACORDIO
 monachillo *v.* MONACILLO
 monaguillo *v.* CLERIZON
 MONARCA
 MONASTERIO
 monastico *v.* MONASTERIO
 MONCAYO
 MONÇON
 mondadientes *v.* MONDO
 mondadura *v.* MONDO
 MONDAR
 MONDEGO
 MONDEJAR
 MONDEJO
 MONDO
 MONDOÑEDO
 MONDRAGON
 MONEDA 1, 2, 3, 4
 monedula *v.* GRAJO
 moneria *v.* MONA
 MONFIES
 MONFORTE
 mongana *v.* BADAL
 MONIPOLIOO (*sic*)
 MONJVI
 mono *v.* MONA
 MONREAL
 MONSTRO
 MONTANTE

montaña *v.* MONTE
 MONTAR
 MONTARAZ *s.* MONTEA
 montazgo *v.* MONTES
 MONTE (MONTILLA)
 MONTE DE PIEDAD *s.* MONTES
 MONTEA *s.* MONTERIA
 MONTEMAYOR
 MONTERA
 MONTERIA (CAÇADOR)
 MONTERO
 MONTERREY
 MONTES
 MONTES DE OCA
 MONTES DE SEGVRA
 MONTESA *s.* MONTON
 montesino *v.* MONTARAZ
 MONTIEL *s.* MONTESA
 MONTILLA
 MONTON
 MONTORO
 montuoso *v.* MONTES
 MONVMENTO
 MONVIEDRO
 moquita *v.* MOCO
 morabitano *v.* MORABITO
 MORABITO
 MORADA
 MORADO
 morador *v.* MORADA
 MORAL (ALMENDRA; BOBO 1)
 morar *v.* MORADA
 MORCELLA
 MORCILLA (MORCON)
 MORCILLO
 MORCON
 MORDAÇA
 MORDAZ
 MORDER
 MORECILLO
 MORELLA
 MORENA

moreno *v.* MORENA
 MORERIA
 MORILLOS
 MORIR
 MORISCOS *s.* MORO
 MORISMA *s.* MORISCOS
 MORMVLLLO
 MORO
 MORON
 MOROSO
 MORRION
 MORTAJA
 MORTAL
 MORTANDAD
 MORTERA
 MORTERETE
 MORTERVELO
 mortezino *v.* MORTANDAD
 MORTVORIO
 MORVECO
 MOSAICO
 MOSCA
 MOSCADA *s.* MOSCATEL
 MOSCARDA
 moscardon *v.* MOSCARDA
 MOSCATEL *s.* MOSQVEARSE
 MOSCELLA
 mosco *v.* ALMIZCLE
 MOSQVEADOR
 MOSQVEARSE (*AMOSCADOR*)
 MOSQVETA
 MOSQVETE (*ARCABVZ*)
 MOSQVETERO
 MOSQVITO
 MOSTACHO
 MOSTAFA
 MOSTAZA
 MOSTO
 mostrador *v.* MOSTRAR; MVESTRA
 MOSTRAR
 MOSTRENCO
 MOTA

MOTAS
 MOTE
 motejar *v.* MOTE
 MOTETE
 MONTEZVMA
 MOTILAR
 MOTILON
 MOTIN (*AMOTINARSE*)
 MOTIVO
 motolita *v.* AGVÇANIEVE
 MOTRICO
 MOTRIL
 MOVEDIZO
 MOVER
 MOVIBLE
 MOVIMIENTO
 MOXI
 MOXICON
 MOXIGATO (*MOGATE*)
 moyon *v.* MOJON
 MOYVELO *s.* MOJONERA
 MOZARABE
 MVCETA
 MVCHACHO (*MOCHACHO*)
 muchedumbre *v.* MVCHO
 MVCHO
 MVDA
 MVDABLE
 MVDANZA
 MVDAR
 MVDEXARES
 MVDO
 MVEBLE
 MVELA 1, *s.* MOLER
 MVELA 2 (*MOLER*)
 MVELAS
 MVELLE
 MVERDAGO
 MVERMO
 MVERTE
 MVESGA
 MVESO

MVESTRA
 muevedo *v.* MOVER
 MVGER
 MVGERIEGO
 mugeril *v.* MVGERIEGO
 MVGRE
 mugriento *v.* MVGRE
 MVGRON
 MVLA 1
 MVLA 2, *s.* MVLO
 MVLADAR
 MVLADAR
 MVLAS
 MVLATO
 MVLETA *s.* MVLA 2
 muleto *v.* MVLA 2
 MVLEY
 mulilla *v.* MVLAS
 mulimariani *v.* MARIOLO
 MVLO (ANA 1; BASTA 2;
 BORDON 1)
 MVLTA
 MVLTIPLICAR
 MVLTITVD
 MVLIR
 mumia *v.* CARNEMOMIA
 MVNDA
 mundano *v.* MVNDO 2
 MVNDO 1, 2
 MVNICION
 MVÑECA 1, 2
 MVÑIDOR
 muñon *v.* MVÑECA 1; MORCILLO;
 PANTORRILLA
 MVRALLA
 MVRCA
 MVRCIANO
 MVRCIEGACO
 murcielago *v.* MVRCIEGACO
 MVRECILLOS
 MVRENA (LAMPREA; ESTANCAR)
 MVRGA

MVRGAÑO
 MVRMVLLLO
 MVRMVRACION
 murmurar *v.* MORMVLLLO;
 MVRMVLLLO
 MVRO
 MVRRIA
 MVRTA (ARRAYAN)
 MVRVECO
 MVSA
 MVSAICO
 MVSARAÑA (MARAÑA; ARAÑA)
 MVSCO
 MVSCVLOS
 MVSEO
 MVSEROLA (AMOHINARSE)
 MVSGANO
 musgaño *v.* MVSARAÑA
 MVSGO
 MVSLO
 musquerolo *v.* MOSCATEL
 mustafa *v.* MOSTAFA
 MVSTIO
 MUY *s.* MVRGON
 myrrha *v.* MIRRA
 myrta *v.* ARRAYAN
 myrto *v.* ARRAYAN

N

NABAL
 NABEGABLE *s.* NAVEGACION
 nabina *v.* NABO
 NABO
 NACAR
 NACARADO
 NACER
 NACION
 nacora *v.* NAÇVLAS
 NAÇVLAS
 NADA
 nadador *v.* NADAR

NADAR
 NADIE
 NADIR (CENID)
 NAGONA
 NAGVELA
 NAIADES
 NAIPES
 NAJARA
 nalgada *v.* NALGAS; LVNADA
 NALGAS
 NAO
 NAOCHEROS
 NAPEAS
 NAPELO
 NAPOLES
 napolitano *v.* NAPOLES
 NARANJA
 naranjada *v.* NARANJA
 naranjado *v.* NARANJA
 naranjal *v.* NARANJA
 NARANJO
 NARCISO
 NARDO (SAN BERNARDO;
 ESPLIEGO)
 NARIGVDO
 NARIZ (NARIGVDO)
 NASA (SARGO)
 naso *v.* AMOHINARSE
 NATAS
 natillas *v.* NATAS
 NATOLIA
 NATVRA
 NATVRAL 1, 2
 NATVRALEZA
 NATVRALIZARSE
 nauclero *v.* NAOCHEROS
 NAVFRAGIO
 nauplio *v.* NAVE
 NAVA
 NAVAJA
 NAVAJADA
 NAVAJON

NAVAL S. NAVICHVELO
 NAVARRA
 NAVE
 NAVEGACION
 NAVEGANTE
 navegar *v.* NAVAL
 NAVICHVELO
 NAVIDAD
 NAVIO S. NAVE
 NAZARENO
 NAZAREO (NAZARENO)
 NAZARET
 NEBEDA
 NEBLI
 NEBLINA
 nebrina *v.* ENEBRO
 nebrissense *v.* NEBRIXA
 NEBRIXA
 necear *v.* NECIO
 necedad *v.* NECIO
 necesitar *v.* NECESSIDAD
 necesaria *v.* LATRINA
 necesarias *v.* NECESSIDAD
 necesario *v.* NECESSIDAD
 NECESSIDAD
 NECIO
 NECTAR
 NEFA (AGVA)
 nefas *v.* FASTA
 NEGAR
 negativo *v.* NEGAR
 NEGLIGENCIA
 NEGLIGENTE
 NEGOCIO
 NEGRA
 NEGRO
 NEGVIJON
 NEGVILLA (AGENVZ; AXENVZ)
 NEMA (HILO)
 NEMESIS
 NEMON
 NENVFAR

NEOMENIA
 NEOPHYTO
 NEOTERICOS
 nepta *v.* GATERA
 NEREIDES
 NERVIO
 NERVIO
 nervoso *v.* NERVIO
 NESGA
 NETO
 NETOBRIGA
 NEUTRAL
 NEVTRO
 NEVAR 1, *s.* NETOBRIGA
 NEVAR 2, *s.* NIEVE
 NI
 NICODEMVS
 NICOLAS
 NICH0
 NIDAL
 NIDO
 NIEBLA 1, 2
 NIEGO
 NIERVO
 NIESPERO
 nieta *v.* NIETO
 NIETO
 NIEVA
 NIEVE (NEVAR 2)
 NIGROMANCIA
 nigromantico *v.* NIGROMANCIA;
 ESCOLAR
 NILO
 NINFA
 ninfo *v.* NINFA
 NINGVNA
 niña *v.* NIÑO
 niñeria *v.* NIÑO
 NIÑO
 niño de la piedra *v.* ENECHAR
 NISPERO (NIESPERO)
 NIVEL

nivelar *v.* NIVEL
 NO
 NOBLE
 nobleza *v.* NOBLE
 NOCHE
 nochebuena *v.* NOCHE
 nochebueno *v.* NOCHE
 NOFRE
 nogada *v.* NOGAL
 NOGAL
 NOLA (CAMPANA)
 NOLITO (FLETE)
 nombradía *v.* NOMBRE
 nombrar *v.* NOMBRE
 NOMBRE
 NOMINA (BVLA)
 NOMINALES
 NOMINAS
 NONA
 NONADA (NO; NADA)
 NONE
 NONES
 NOQVE
 NORDESTEAR
 NORMANDIA
 NORTE
 NOSOTROS
 NOSTICOS
 NOTA
 NOTABLE
 NOTAR
 NOTARIA
 NOTARIO (ESCRIVANO)
 NOTICIA
 notificacion *v.* NOTIFICAR
 NOTIFICAR
 notoriedad *v.* NOTORIO
 NOTORIO
 NOTVRNO
 novalia *v.* ROMPER
 novato *v.* NVEVO
 NOVEDAD

NOVELA
 novelero *v.* NOVELA
 NOVENA
 novenario *v.* NOVENA; NOVENAS
 NOVENAS *s.* NVEVE
 NOVENO 1, *s.* NOVIEMBRE
 NOVENO 2, *s.* NOVENAS
 NOVES
 NOVIA
 noviciado *v.* NOVICIO
 NOVICIO
 NOVIEMBRE
 NOVILLO
 novio *v.* NOVIA
 NVBADA
 NVBE 1
 NVBE 2, *s.* NVBLO
 nublado *v.* NVBLO
 NVBLO
 NVCA
 NVEGADO (BORRAX)
 NVERA
 nueso, -a, *v.* NUESTRO
 NVESTRA SEÑORA DE ATOCHA *s.*
 ATOCHA
 NVESTRO
 NVEVAS
 NVEVE
 NVEVO
 NVEZ
 NVEZA
 NVFLA
 NVMANCIA
 NVNCA
 NVNCIO (EMPLAZADOR)
 NVÑEZ
 NVÑO
 NVSCO
 NVTRIA

ÑVDO *s.* NVCA
 ñudoso *v.* ÑVDO
 O
 O
 OBEDECER
 obediencia *v.* OBEDECER
 OBELISCO
 OBISPADO
 OBISPALIA
 OBISPILLO 1, 2
 OBISPO
 objeccion *v.* OBJECTO
 OBJECTO
 objetar *v.* OBJECTO
 objeto *v.* OBJECTO
 OBLACION
 OBLADA
 OBLEA
 obligacion *v.* OBLIGAR
 OBLIGAR
 OBRA
 obrada *v.* GVEBRA
 obrador *v.* OBRA
 obreria *v.* OBRA
 obrero *v.* OBRA
 obscurecer *v.* ESCVRECER
 obscurecerse *v.* OSCVRO
 obscuridad *v.* OSCVRIDAD;
 OSCVRO
 obscuro *v.* ESCVRECER;
 OSCVRIDAD
 OBSEQUIAS
 obstaculo *v.* OBSTAR
 obstante *v.* OBSTAR
 OBSTAR
 obstinacion *v.* OBSTINADO;
 OSTINADO
 OBSTINADO
 OCAL
 OCAÑA
 OCASION 1, 2

Ñ

ÑAFETE *s.* NADIR

OCASIONADO
 OCEANO
 OCIDENTE
 OCIO
 ociosidad *v.* OCIO
 ocioso *v.* OCIO
 OCRE
 OCTAVARIO *s.* OCHAVADO
 OCTVBRE *s.* OCHENTA
 OCVPAR
 OCVRRIE (CVRSO)
 OCHAVA
 OCHAVADO
 OCHAVO
 OCHENTA
 OCHO
 ODA
 odiar *v.* ODIO
 ODIO
 odioso *v.* ODIO
 ODON
 odorifero *v.* OLOR
 ODRE
 odrina *v.* ODRE
 OFENDER
 OFERTA *s.* OFERTORIO
 OFERTORIO *s.* OFRECER 2
 oficial *v.* OFICIO
 OFICIAR
 OFICINA
 OFICIO
 OFICIOSO
 OFRECER 1, 2
 OFVSCAR
 OGAÑO
 OI
 OIDO
 OIDOR
 OIR
 OJAL
 ojarasca *v.* FAGINA
 ojeada *v.* OJEAR

OJEAR
 OJEO
 OJERAS
 OJERIZA
 OJETE
 OJO (ALAMO; AOJAR)
 OLA
 olandilla *v.* BOCACI
 OLEAR
 OLER
 OLIGARCHIA
 OLIMPIA
 OLIMPO
 OLIO 1, 2
 OLITE
 OLIVA 1, 2
 OLIVAR
 olivo *v.* OLIVA
 OLMEDA
 OLMEDO
 OLMO
 OLOR
 oloroso *v.* OLOR
 olvidadizo *v.* OLIVIDAR
 OLVIDAR
 OLVIDO
 olympiada *v.* OLIMPIA
 olympico *v.* OLIMPIA
 OLLA (CADOZO; GVADAMALLETE)
 OLLADA (OBLADA)
 ollería *v.* OLLERO
 OLLERO
 OMBLIGO
 ome *v.* HOMBRE
 OMECILLO
 OMENAGE
 omnipotente *v.* POTENTADO
 ONÇA 1, 2
 ONDA
 ONDEAR
 ONOMATOPEYA
 ONTIVEROS

ONZE
 ONZENO *v.* ONZE
 OÑA
 OÑEZ
 OPILACION (CASTAÑA; APILAR)
 OPINION
 OPIO
 OPONER
 OPORTVNO
 opositor *v.* OPONER
 OPRIMIR
 OPTICOS
 oque *v.* ALBOROQVE
 ORA
 ORACION
 ORACVLO
 ORADA
 orador *v.* ORACION
 ORAN
 ORAR
 orarium *v.* ESTOLA 2
 ORATE
 oratorio *v.* ORACION
 ORATORIO (CAPILLA 2)
 ORBIGO
 ORCA
 ORÇA (ORCA)
 ORÇVELO
 ORDEN (ORDENES)
 ORDENAMIENTO
 ORDENANÇA
 ORDENAR
 ORDENES 1, 2, 3
 ORDEÑAR
 ORDIA TE
 ORDINARIO
 ORDOÑEZ
 ORDOÑO
 OREADES
 OREAR
 OREGANO (ISOPO)
 OREJA

orejas de abad *v.* LASAÑA
 OREJONES
 ORENSE
 OREO
 ORFEO
 organista *v.* ORGANO
 organizar *v.* ORGANO
 ORGANO
 ORGAZ
 ORGVLLO
 orgulloso *v.* ORGVLLO
 oriental *v.* ORIENTE
 ORIENTE
 ORIGEN
 ORIGINAL
 ORIHVELA
 ORILLA
 orillarse *v.* ORILLA
 orillo *v.* ORILLA
 ORIN
 ORINA
 orinal *v.* ORINA
 orinar *v.* ORINA
 orines *v.* ORINA
 ORIZONTE
 ORLA (ORLO)
 ORLO
 ORNAR
 ORO 1, 2
 OROMATE
 oropel *v.* ORO 2
 OROPENDOLA (ITERICIA)
 OROPESA
 OROPIMIENTO (ARSENICO)
 OROZVZ (REGALIZA)
 ortelano *v.* GVERTO
 ORTHOGRAPHIA
 ORVGA
 ORVJO (ARRAAX)
 osadas *v.* AOSADAS
 osadia *v.* OSAR
 OSAR

OSARIO
 OSCVRIDAD S. ESCVRECER
 OSCVRO
 OSMA
 OSO
 ospederia *v.* ESPITALERO
 ossa *v.* OSO
 ossario *v.* GVESSO
 ossera *v.* OSO
 ostia *v.* OSTRÁ
 OSTINADO
 ostion *v.* OSTRÁ
 OSTRÁ
 OSTRACISMO (EFESO)
 OSTROGODOS (GODOS)
 OSVNA
 OTEAR
 otero *v.* OTEAR
 otoñizo *v.* OTOÑO
 OTOÑO
 otorgada *v.* ESPOSAS
 OTORGAR
 OTRO
 OTVBRE
 OVADO (GVEVO)
 oval *v.* GVEVO
 ovalo *v.* GVEVO
 OVAS
 OVEJA
 overa *v.* GVEVO
 OVIEDO
 OVILLAR
 OVILLO (BOLTEAR)
 OX
 OXALA
 OXETE
 OXIMIEL

P

P
 PABLO
 PACER
 PACIENCIA

paciente *v.* PACIENCIA; CORNVDO
 PACIFICAR
 PACIFICO
 PACTO
 PACHECO
 PADECER
 PADILLA
 PADRASTRO
 PADRE
 PADRINO
 PADRON 1, 2, 3
 PAGADERO
 pagador *v.* PAGAR
 PAGAMENTOS
 paganismo *v.* PAGANO
 PAGANO (PAGAR)
 PAGAR (PAGADERO)
 pagar en pie *v.* LVEGO
 PAGE
 page de lança *v.* ESCVDERO
 PAGEL
 pago *v.* PAGAR; FVENTE
 PAILA
 PAJA
 pajada *v.* PAJA
 pajar *v.* PAJA
 paje *v.* PAGE; BESVGVETE
 pajuelas *v.* PAJA
 PALA 1, 2
 PALABRA
 palabrero *v.* PALABRA
 palaciano *v.* PALACIOS
 palaciego *v.* PALACIOS
 PALACIO
 PALACIOS
 PALADAR
 paladear *v.* PALADAR
 PALADIN
 paladino *v.* PALACIO;
 ESPALADINAR
 paladion *v.* BOLONIA
 PALAFREN

palafrenero *v.* PALAFREN
 PALAMAÇO
 PALAMENTA
 PALANCA (GANAPAN)
 palanquin *v.* PALANCA
 PALATINO
 PALENCIA
 PALENQVE
 paleria *v.* MADRE 2
 palero *v.* ACEQVIA; MADRE 2
 PALESTRA
 PALETA 1, *s.* PALA 2
 PALETA 2
 PALIA
 PALILLO *s.* PALO
 PALIO 1, 2
 paliuro *v.* AZEBO
 PALMA 1, 2, 3
 PALMADA
 PALMARIA
 PALMATORIA
 palmero *v.* PALMA 3
 PALMILLA
 PALMITO
 PALMO (CODO)
 PALO
 PALOMA
 palomar *v.* PALOMA
 PALOMERA
 palomeria *v.* PALOMA
 PALOMILLA 1, 2 (FVMVSTERRAE)
 palomina *v.* PALOMILLA 1;
 FVMVSTERRAE
 palomino *v.* PALOMA
 palomo *v.* PALOMA
 PALOTES
 PALPAR
 palpebra *v.* CEJA
 palpitacion *v.* PALPITAR
 PALPITAR
 pallet *v.* PAJA
 palleta *v.* ALGVAQVIDA

palleté *v.* ALCREVITE
 palletero *v.* ALGVAQVIDA
 PAMPANADA
 PAMPANAROTA
 PAMPANO
 PAMPHILO
 PAMPLONA
 PAN 1
 PAN 2 (PANES)
 panaderia *v.* PANADERO
 PANADERO
 panadizo *v.* VÑERO
 PANAL
 PANARIZO
 PANÇA
 pancera *v.* PANÇA
 PANCORBA
 PANCRACIO
 PANDECTAS
 PANDERO (ATAMBOR)
 PANDILLA
 PANDORA
 PANDORGA
 panduro *v.* BANDVRRIA
 PANDVRRIA (BANDVRRIA)
 PANEGIRICO
 PANELES
 panera *v.* PANADERO
 PANES
 PANIAGVA
 PANIAGVADO
 PANILLA
 PANIQVESILLO *s.* PANARIZO
 PANIZO *s.* PANIQVESILLO
 PANIZVELO
 panoja *v.* BOHORDO; ESPADAÑA
 PANOL
 PANPLONA
 PANTANO (MARJAL)
 PANTHEON
 PANTHERA
 PANTOMINO

PANTORRILLA
 pantuflaço *v.* PANTVFLVO
 PANTVFLVO
 PAÑALES
 pañalon *v.* PAÑALES
 PAÑETES
 pañicuelo *v.* FAÇOLETO
 PAÑO 1, 2 (PAÑETES)
 PAÑOS 1, 2
 paños menores *v.* BRAGAS
 PAPA (INFANTE)
 papada *v.* PAPO
 PAPAGAYO (GAYO; REDOMA)
 PAPAHIPO
 PAPAR (PAPAS)
 PAPARESOLLA
 PAPARO
 PAPAS *s.* PAPASAL 2
 PAPASAL 1
 PAPASAL 2, *s.* PAPIROTE
 papazgo *v.* PAPISTA
 PAPEL (BIBLIA)
 PAPELES
 PAPELINA (CARCAX; ALMIRANTE)
 papelista *v.* PAPELES
 papelon *v.* PAPELES
 papera *v.* PAPO
 papilla *v.* PAPAS
 papillo *v.* ALMIZCLE
 PAPIROTE
 PAPISTA
 PAPO (BOHONERO; BVFOS;
 PAPOS)
 PAPOS
 PAR
 PARA
 PARABOLA
 parada *v.* PARAR
 paradera *v.* PARAR
 PARADIGMA
 paradizo *v.* VÑERO
 parador *v.* PARAR

PARADOXA
 PARAFRENALES (BIENES)
 PARAGRAFO
 PARAISO
 PARALIPÓMENON
 PARALITICO
 PARALOGISMO
 PARAMO
 paronympho *v.* NINFA
 PARAPETO
 PARAPHRASIS
 paraphrastēs *v.* PARAPHRASIS
 PARAR
 PARASCEVE
 PARASISMO
 PARASITO
 PARCAS
 PARCIAL (PARTICVLAR)
 parcionero *v.* PARTICVLAR
 PARCHÉ
 PARDAL
 pardillo *v.* PARDO 3
 PARDO 1, 2, 3
 PAREAR *v.* PAR
 PARECER 1, 2, 3 (PARECIDOS)
 PARECIDOS
 PARED
 PAREDON
 pareja *v.* PARES
 parejo *v.* PARES
 PARENTELA
 PARENTESIS
 PARES *s.* PAR (NONES)
 PARIAS
 paridera *v.* PARIR
 paridero *v.* PARIR
 PARIENTE
 PARIR (PIEDRA DEL AGVILA)
 PARLAMENTO
 PARLAR
 parleria *v.* PARLAR
 parlero *v.* PARLAR

parma *v.* ESCUDO
 PARNASO
 paroco *v.* PERROQUIA
 PAROTIDAS
 PARPADO
 PARQUE
 PARRA (ESPARRANCARSE)
 PARRAFO (PARAGRAFO)
 parral *v.* ESPARRANCARSE
 PARRICIDA
 parril *v.* PARRA
 PARRILLA (BARRACAS; ESPARRANCARSE)
 PARRILLAS
 parroquia *v.* PERROQUIA
 PARTE 1, 2, 3
 PARTERA *s.* PARIR (COMADRE)
 PARTESANA *s.* PARTO
 particion *v.* PARTE 3
 PARTICIPAR
 PARTICIPIO
 PARTICVLA *s.* PARTE 2
 PARTICVLAR *s.* PARTICVLA
 PARTIDA
 PARTIDAS
 partido *v.* PARTE 3
 partidor *v.* PARTIDA
 partija *v.* PARTE 3
 PARTO (PARIR; PIEDRA DEL AGVILA)
 PARTOS *s.* PARTERA
 PARTVRA
 PARVA
 PASCASIO (PASCVAL; HERRAR)
 PASCVA
 PASCVAL
 pasillas *v.* GETA
 pasmarse *v.* PASMO
 PASMO
 PASQVIN
 pasada *v.* PASSAR 1
 passadero *v.* PASSAR 1

passadizo *v.* PASSAR 1
 PASSADOR 1, 2
 PASSAMANO
 passante *v.* PASSAR 2
 PASSAPASSA (CORAL; IVEGO 2)
 passaporte *v.* PASSAR 1
 PASSAR 1, 2 (PASO)
 PASSARSE 1, 2
 passas *v.* PASSARSE 1
 passatiempo *v.* PASSAR 1
 passear *v.* PASSAR 1
 passeio *v.* PASSAR 1
 PASSION 1, 2
 PASSIONARIOS
 passionero *v.* PASSIONARIOS
 PASO (PASSAR 1)
 PASTA
 PASTAR *s.* PASTORA
 PASTEL 1, 2
 pasteleria *v.* PASTEL 1
 pastelero *v.* PASTEL 1
 pastillas *v.* PASTA
 PASTINACA
 pasto *v.* PASTAR
 PASTOR
 PASTORA
 pastorcica *v.* PASTORA
 pastorcilla *v.* PASTORA
 pastorear *v.* PASTORA
 PATA 1
 PATA 2, *s.* PATO
 pataca *v.* PATA 1
 patada *v.* PATA 1
 patan *v.* PATA 1
 patear *v.* PATA 1
 PATENA 1, 2
 PATERNAL *s.* PATRIMONIO
 paternidad *v.* PADRE
 patin *v.* PATIO
 PATIO *s.* PATA 2
 patitiesso *v.* PATA 1
 PATO

patochada *v.* PATA 1

PATRAÑA

PATRIA

PATRIARCA

patrimonial *v.* PATRIMONIO

PATRIMONIO

PATRON

patronazgo *v.* PATRON

patudo *v.* PATA 1

PAVLAR

PAVSA

pausado *v.* PAVSA

PAVSAN

PAVTA

PAVTAR

PAVELLON

PAVES

PAVESA

PAVILO

PAVIMENTO

PAVO

PAVON

pavonada *v.* PAVONEAR

PAVONAR

PAVONEAR (ANADEAR)

PAVOR

PAVORDE

pavordia *v.* PAVOR

pavoroso *v.* PAVOR

PAXARA

PAXARILLA

PAXARO

PAZ

PEAGE

PEAL

PEAÑA

PEBETE

pebrada *v.* PEBRE

PEBRE

PECA

pecaça *v.* PEGA

PECADO

pecador *v.* PECADO

PECADORA

pecante *v.* PECADO

PEÇON

pecoso *v.* PECA

PECTORAL

PECVLIO (GANADO)

PECVNIA

pechar *v.* PECHO

pechero *v.* PECHO

PECHINA

PECHO

PECHVGA

PECHVGVERA

PEDAÇO

PEDAGE

PEDAGOGO

PEDANTE

PEDERNAL

PEDESTAL

pedigueño *v.* PEDIR

PEDIR

PEDO

PEDORRERAS

PEDRADA 1

PEDRADA 2, *s.* PIEDRA

pedregal *v.* PEDRADA

pedregoso *v.* PEDRADA

PEDREÑAL (ARCABVZ)

PEDRERA *s.* PEDRADA

pedreria *v.* PIEDRA 4

PEDRERO 1 (PEDRADA)

PEDRERO 2 *s.* PEDRERA

PEDRO

PEER

PEGA 1, 2 (EMPEGAR; HVRRACA)

pegadillo *v.* BOTANA

pegajoso *v.* PEGAR

PEGAR

PEGASO

PEGVJAL

PEINADOR

PEINE
 PELADILLAS
 peladillo *v.* MIÑERVELOS
 PELAGE
 PELAMBRE
 pelamesa *v.* PELEA
 PELAR
 PELEA
 PELECHAR
 PELEGRINO
 PELIAGVDO
 PELICANO
 PELIGRO
 peligroso *v.* PELIGRO
 pelillo *v.* FLVECO
 PELITRE
 PELMAÇO
 pelmazo *v.* APELMAZAR
 PELO (CABELLO)
 pelona *v.* PELAR
 PELOTA (DOMINGVILLO; FALTA 2;
 TRINQVETE)
 PELOTERO
 PELTRE (ESTAÑO)
 PELVSA
 PELLA
 pellada *v.* PELLA
 pellegeria *v.* PELLEJA
 pellegero *v.* PELLEJA
 PELLEJA
 pellejo *v.* PELLEJA; CVERO
 pellico *v.* PELLEJA
 PELLIZCAR
 pellizco *v.* PELLIZCAR
 PENA
 PENACHO
 PENAR
 PENCA 1, 2
 PENDENCIA
 PENDER
 PENDOLA
 PENDON

penetrante *v.* PENETRAR
 PENETRAR
 PENITENCIA
 penitenciado *v.* PENITENCIA
 penitenciar *v.* PENITENCIA
 penitente *v.* PENITENCIA
 penoso *v.* PENA
 pensamiento *v.* PENSAR
 PENSAR
 pensas *v.* DESPENDER
 pensativo *v.* PENSAR
 PENSION
 pensionario *v.* PENSION
 PENSIR
 penula *v.* BERNIA
 PENVRIA
 PEÑA
 Peñafiel *v.* PEÑA
 Peñafior *v.* PEÑA
 peñasco *v.* PEÑA
 Peñicola *v.* PEÑA
 peñola *v.* PENDOLA
 PEON
 peonada *v.* PEON
 PEONÇO
 PEONIA
 PEOR
 peostre *v.* PRIOSTE
 pepinazo *v.* PEPINO
 pepinela *v.* PIMPINELA
 PEPINO (COHOMBRO)
 PEPIONES
 PEPITA (FLEMA; GALLINA)
 PEPITORIA
 PEQVEÑO
 PERA
 PERADA
 PERAILE (PERCHA)
 PERAL
 PERALVILLO
 PERAZA
 PERCANCES

PERCHA (ARMAR)
 PERCHAS
 perdedizo *v.* PERDER
 PERDER
 perdida *v.* PERDER
 perdidoso *v.* PERDER
 perdigada *v.* PERDIGON
 perdigado *v.* PERDIGON
 perdigar *v.* PERDIGON
 PERDIGON
 PERDIGONES
 perdiguero *v.* PERDIGON
 perdimiento *v.* PERDER
 PERDIZ
 perdon *v.* PERDONAR
 PERDONAR
 perdulario *v.* PERDER
 PERDVABLE (DVRAR)
 perecedero *v.* PERECER
 PERECER
 pereçoso *v.* PEREZA
 peregil *v.* APIO
 peregrinacion *v.* PEREGRINO
 peregrinar *v.* PEREGRINO
 PEREGRINO
 PERENAL (ATREGVADO)
 perendengues *v.* TRAJE
 PEREZA
 PERFETO
 PERFIL (FABRICA)
 PERFILAR (HILANDERA)
 PERFVME
 PERGAMINO (ATABAL)
 PERICO
 perigallo *v.* GALLO
 PERIODO
 PERIPATETICOS
 perjudicar *v.* PERJVIZIO
 perjudicial *v.* PERJVIZIO
 PERJVIZIO
 perjurar *v.* IVRAR
 PERLA (ALJOFAR)

PERLADO (PRELADO)
 perlatico *v.* PARALITICO
 perlesia *v.* PARALITICO
 PERMANECER
 permanente *v.* PERMANECER
 PERMITIR
 pernada *v.* PIERNA
 pernear *v.* PIERNA
 PERNICIOSO
 PERNIL (PIERNA)
 PERNIOS
 perníquebrar *v.* PIERNA
 PERO
 PEROL
 perola *v.* BERRVGA
 PERPETVO
 PERPIÑAN
 PERPVNTE
 PERQVE
 PERRERAS
 PERRERO
 PERRO
 PERROQUIA
 perroquiano *v.* PERROQUIA
 persecucion *v.* PERSEGVIR
 PERSEGVIR
 PERSEVERAR
 persico *v.* DVRAZNO
 PERSONA
 PERSONERO
 PERSVADIR
 PERTENECER
 perteneciente *v.* PERTENECER
 pertenencia *v.* PERTENECER
 PERTIGA
 PERTIGVERO
 PERTINAZ
 PERTRECHAR
 pertrecho *v.* PERTRECHAR
 PERTVRBAR
 PERV
 PERVLERO

PERVERSO
 pervertido *v.* PERVERTIR
 PERVERTIR
 PESADILLA
 PESADO
 PESADUMBRE
 PESAR
 pesar vaca *v.* BVEY
 PESAS
 pesca *v.* PESCADO
 pescada *v.* PESQVERA
 pescaderia *v.* PESQVERA
 PESCADO
 pescador *v.* PESCADO
 PESCAR
 pescoçada *v.* PESCVEZO
 pescôçon *v.* PESCVEZO
 pescuda *v.* PESCV DAR
 PESCV DAR
 PESCVEZO
 PESEBRE
 pesebrera *v.* PESEBRE
 pesebron *v.* PESEBRE
 pesgar *v.* BRVMAR
 PESO
 PESOLES (FRISOLES)
 espuntar *v.* PESPVNTE
 PESPVNTE
 PESQVERA
 pesquisa *v.* PESQVISAR
 pesquisador *v.* PESQVISAR
 PESQVISAR
 PESTAÑAS
 pestañar *v.* PESTAÑAS
 PESTE (RVDA)
 pestilencia *v.* PESTE
 pestilencial *v.* PESTE
 PESTILLO
 PESTOREJO
 pestorejon *v.* PESTOREJO
 petauro *v.* BOLTEAR
 peticion *v.* PEDIR

PETIS
 PETO
 petoral *v.* PETO
 PETRAL
 PEVETE
 PEZ 1, 2
 pez espada *v.* ESPADERO
 PEZON
 pharo *v.* FARO
 physico *v.* FISICO
 PIA (FACANEA)
 piache *v.* PIAR
 PIADOSO (PIEDAD)
 piante *v.* PIAR
 PIAR
 PIARA
 PICA
 picago *v.* PICA
 picadillo *v.* PICAR
 picador *v.* PICAR
 picante *v.* PICAR
 PICAÑO
 PICAPORTE
 PICAR
 picaratos *v.* IVS BARBA 2
 PICARDIA
 PICARO
 PICARSE
 picas (passar por —) *v.* CRVGIA
 picaseca *v.* PICA
 PICATOSTE
 picaza *v.* HVRRACA
 PICINA s. PICHON
 pico *v.* PICAR
 pico de gorrion *v.* ESPVELA 1
 PICO DE GRVLLA
 picola *v.* EMPIOLAR
 picon *v.* PICATOSTE
 PICOTA (EMPICAR)
 PICOTE
 PICOTERA
 picudo *v.* PICARSE

PICHEL
 PICHON
 PIE 1 (BESAR)
 PIE 2 s. PIE DE GALLO
 pie de amigo *v.* ARROPEAS
 PIE DE GALLO s. PIES
 PIEÇA
 PIEDAD
 PIEDRA 1, 2, 3, 4, 5, 6 (GRANIZO)
 PIEDRABEZAR (BEZAR)
 piedraçufre *v.* AÇVFRE
 PIEDRA DEL AGVILA
 piedra de fuego *v.* MARQVESITA
 PIEDRAIMAN
 piedralumbre *v.* ALVMBRE
 PIEDRAPOMEZ
 PIEDRAZVFRE (*cf.* piedraçufre)
 PIEL
 PIELAGO
 pienso *v.* ALMVERÇO 1
 PIERNA
 PIES 1, 2, s. PIE
 PIEZA
 PIEZGO s. PITIPIE
 PIFARO (FLAVTA)
 PIGMEO
 PIGVELAS (EMPIOLAR)
 PIJA
 PILA
 PILAR 1, 2, 3 (COLVMNA)
 pilastra *v.* PILAR 2
 PILDORAS
 pileo *v.* BONETE
 pilon *v.* APILAR; PILA
 PILOTO
 PILTRAFAS
 PIMENTERO
 PIMIENTA
 PIMIENTO
 PIMPINELA
 PIMPOLLO
 PINA

pinabete *v.* PINO
 pinar *v.* PINO
 PINCEL
 pincelada *v.* PINCEL
 PINILLO
 pinjante *v.* PINJAR
 PINJAR
 PINO (PINA)
 PINTA
 PINTAR
 pintor *v.* PINTAR
 pintura *v.* PINTAR
 PINZAS
 PINZEL
 PIÑA
 PIÑON
 PIÑONATE
 piojeria *v.* PIOJO
 PIOJO
 piojoso *v.* PIOJO
 piojuelo *v.* ARADOR
 PIPA
 PIQVE
 piquero *v.* PICA
 piquete *v.* PIQVE
 PIRAMIDE (OBELISCO)
 PIRATA
 PIRENE
 PIRENEOS
 PIROMANCIA
 PIRV
 pisada *v.* PISAR
 PISAR (PISAVERDE)
 PISAVERDE (CARCAÑAL)
 PISCINA
 PISO
 PISTACHO
 PISTO
 pistoletazo *v.* PISTOLETE
 PISTOLETE (ARCABVZ; FLAVTA)
 PISVERGA
 PITA

PITANÇA
 pitanceria *v.* PITANÇA
 pitancero *v.* PITANÇA
 PITAÑOSO (LAGAÑOSO)
 pitar *v.* PITANCA
 PITIMA
 PITIPIE *s.* PIE DE GALLO
 PITO 1, 2
 pitonico *v.* APITONARSE
 PIZCA
 pizpita *v.* AGVÇANIEVE
 PLACA *s.* PLAÇO
 PLAÇA (PLAÇO)
 placentero *v.* PLAZER
 PLAÇO
 PLAÇVELA
 PLAGA (LLAGA)
 plaga austral *v.* AVSTRO
 PLANA 1, 2
 PLANCHA
 PLANETAS
 PLANO (LLANO; LENGVADO)
 PLANTA (FABRICA)
 plantar *v.* PLANTA
 plantel *v.* PLANTA
 PLANTO (LLANTO)
 PLASENCIA
 PLATA
 PLATAFORMA
 PLATANO
 plateria *v.* PLATA
 platerilla *v.* FREGADERO
 platero *v.* PLATA
 PLATICA
 platicar *v.* PLATICO
 PLATICO
 PLATO
 plato (hacer—) *v.* BANQVETE
 PLAYA *s.* PLAGA
 PLAZER *s.* PLACA
 PLEBEYO
 PLEGAR
 PLEGARIA

PLEITA
 pleiteante *v.* PLEITO 1
 pleitear *v.* PLEITO 1
 PLEITESIA
 PLEITO 1, 2
 PLIEGO *s.* PLIEGVES
 PLIEGVES *s.* PLEGAR
 PLINTO
 plomada *v.* PLOMO
 PLOMO
 PLVMA 1, 2
 plumon *v.* PLVMA; COLCHON
 PLVTARCO
 PLVTON
 pluvia *v.* LLVVIA
 pluvial *v.* BERNIA
 POBLACHO *s.* PVEBLO
 POBLAR
 POBLETE
 POBRE
 POBREZA
 poçal *v.* CVBO
 POCILGA
 POCIMA (APOCIMA)
 POCO
 POÇO
 podadera *v.* PODAR
 PODAR
 PODENCO
 PODER
 PODRE
 POETA (CISNE)
 POLAINAS (CALÇAS)
 polayna *v.* CALÇAS
 POLEA
 POLEADA
 POLEO
 POLICIA
 POLILLA
 POLIPODIO
 politica *v.* POLICIA
 político *v.* POLICIA

polo *v.* NORTE
 POLOS
 POLTRON
 poltroneria *v.* POLTRON
 POLVCION
 POLVILLOS
 POLVO
 POLVORA
 polvorear *v.* POLVO
 polvoriento *v.* POLVO
 POLVORIN
 polvorizar *v.* POLVO
 polvoroso *v.* POLVO
 POLVOS
 polla *v.* POLLO
 pollar (= polar) *v.* POLOS
 pollera *v.* POLLO
 POLLINO
 POLLO
 POMA
 POMEZ
 pomo *v.* POMA
 POMPA
 POMPEARSE
 pomposo *v.* POMPEARSE
 PONCELLA
 PONCIL
 PONÇOÑA
 ponderacion *v.* PONDERAR
 PONDERAR
 ponedor *v.* PONER
 PONER
 poner los pies *v.* BESAR
 PONIENTE
 PONTAZGO *s.* PONTIDO
 PONTE DE LIMA
 PONTEVEDRA
 PONTIDO *s.* PUENTE 1
 PONTIFICE
 ponton *v.* PVENTE 1
 POPA
 POPAR

POPVLAR
 POPVLOSO
 POQVEDAD (POCO)
 POR
 porcal *v.* CHAVACANO
 PORCELANA
 PORCVNA
 PORENDE
 PORFIA
 PORFIDO
 PORFIRIO
 PORFIRION
 porhidia *v.* PORFIA
 POROS
 POROSO
 porqueñuela *v.* PVERCA
 PORQVERIA *s.* PORQVERIZO
 PORQVERIZO *s.* PVERCA
 PORQVERON (ESBIRRO;
 GALFARROS)
 porquiron *v.* ESBIRRO
 PORRA (BASTON 3)
 PORRATE
 PORRETAS *s.* PVERRO
 portino *v.* PVERRO
 porro *v.* PORRA
 PORTADA (PVERTA 1)
 portador *v.* PORTAZCO
 portal *v.* PVERTA 1
 PORTALEÑA
 portante *v.* HACA
 PORTAZCO
 portazgo *v.* PVERTOS
 portazguero *v.* PORTAZCO;
 PVERTOS
 PORTE
 portear *v.* PORTAZCO
 porteria *v.* PVERTA 1
 portero *v.* PVERTA 1; EMPLAZA-
 DOR
 PORTILLO *s.* PVERTA 1
 PORTO

posada *v.* POSAR
 POSAR
 POSAS
 poseedor *v.* POSEER
 POSEER
 poso *v.* POSAS
 pospartos *v.* PARTOS
 POSPELO
 POSPONER
 possession *v.* POSEER
 POSSIBLE
 POSTA 1, 2
 POSTAS
 POSTEMA (APOSTEMA)
 POSTES
 POSTIGO
 POSTILLA
 postillon *v.* POSTAS
 POSTRE
 POSTRERO
 postrimeria *v.* POSTRERO
 POSTVRA 1, 2
 POSTVRAS
 POTAGE
 POTENCIA
 POTENTADO
 potente *v.* POTENTADO
 POTRA
 potranca *v.* POTRO
 POTRERO
 POTRO 1, 2
 POTROSO
 poyal *v.* POYO
 poyata *v.* POYO
 POYO
 praderia *v.* PRADO
 PRADO
 PRATICA
 praticante *v.* PRATICA
 PRATICAR
 prebenda *v.* BECA
 PREBENDADO

PREBOSTE
 PRECEDER
 PRECIAR
 PRECIO
 PRECIOSO
 PRECIPICIO
 PRECIPITADO (DESPEÑARSE)
 PRECIPITARSE
 predecesor *v.* PRECEDER
 PREDICADOR
 PREDICAR
 PREDICATO
 PREFACIO
 PREFACION
 PREFECTO
 PREFERIDO
 PREFERIR
 PREFERIRSE
 PREGON
 PREGONAR
 PREGONERO
 PREGVNTA
 PREGVNTADOR
 PREGVNTAR
 PRELACIA (PRELADO)
 PRELADO
 preludio *v.* LEVADA
 PREMÁTICA
 premia *v.* PREMIADO
 PREMIADO
 PREMIAR
 PREMIO
 PRENDA
 PRENDAR
 PRENDEDERO
 PRENDER 1, 2
 PRENDIDO
 prendimiento *v.* PRENDIDO
 PRENSA (EMPRESA)
 prensar *v.* PRENSA
 PREÑADA
 PREPARAR

PREPVCIO
 PRERROGATIVA
 PRESA
 PRESADA
 PRESAGIO (SAGAZ)
 presbiterato *v.* PRESBITERO
 PRESBITERO
 prescrivir *v.* ESCRIVANIA 2
 PRESEAS
 PRESENCIA
 presentar *v.* PRESENTE
 PRESENTE
 presidencia *v.* PRESIDENTE
 PRESIDENTE
 PRESIDIO
 PRESIDIR
 PRESO (PRENDER 2)
 PRESTAMERA
 PRESTAMO
 PRESTAR (EMPRESTAR)
 PRESTE
 PRESTE IVAN
 PRESTITO
 PRESTO
 PRESVMIR
 presumptuoso *v.* PRESVNCION
 PRESVNCION
 PRESVPONER
 presupuesto *v.* PRESVPONER
 PRESVROSO
 PRETAL
 PRETENDER
 PRETOR
 PREVALECER
 PREVARICAR
 PREVENDA
 PREVENIR
 PRIVILEGIO
 PREZ
 PRIESSA
 PRIETO
 PRIMA 1, 2, 3

PRIMADO
 PRIMAL
 PRIMAVERA
 primaverais *v.* ESPLIEGO
 PRIMERA
 PRIMERIZA
 PRIMERO
 PRIMICERIO (CAPISCOL)
 PRIMICIAS
 PRIMO
 primor *v.* PRIMO
 PRINCIPADO
 PRINCIPAL
 PRINCIPE
 PRINCIPIO
 PRINGADAS
 PRINGAR
 PRINGVE
 PRIOR
 PRIORATO
 PRIOSTE
 PRISA (APRIESSA)
 PRISCA
 PRISION (PRENDER 2)
 prisionero *v.* PRENDER 2;
 CAVATIVO
 privada *v.* CONSEIO DE CAMARA
 PRIVADO (PRIVAR 2)
 privança *v.* PRIVAR 2
 PRIVAR 1, 2
 PRO
 PROA
 PROBATA
 PROBLEMA
 proboscide *v.* ELEFANTE
 PROCEDER
 PROCESSION
 processionario *v.* PROCESSION
 PROCESSO (PROCEDER)
 PROCVRADOR
 PROCVRAR
 prodigalidad *v.* PRODIGO

PRODIGIO
 PRODIGO
 PRODVZIR
 PROEJAR
 profanar *v.* PROFANO
 PROFANO
 PROFERIRSE
 PROFESSAR 1, 2
 profession *v.* PROFESSAR 1
 professo *v.* PROFESSAR 1
 professor *v.* PROFESSAR 2
 PROFETA
 profundidad *v.* PROFVND0
 PROFVND0
 prohejar *v.* PROHEZA
 PROHEMIO
 PROHEZA
 PROHIBIR
 prohidia *v.* PROHIDIAR
 PROHIDIAR
 PROHIJAR
 PROLIXO
 PROLOGO
 PROLONGAR
 promessa *v.* PROMETER
 PROMETER
 PROMETIDO
 promission *v.* PROMETER
 PROMVLGAR
 PRONOMBRE
 PRONOSTICAR
 PRONOSTICO
 PRONTVARIO
 PRONVNCIACION
 PRONVNCIAR
 propiedad *v.* PROPIOS
 PROPINA
 PROPIO (PROPIOS)
 PROPIOS
 PROPONER
 PROPORCION
 proposicion *v.* PROPONER

PROPOSITO
 propietario *v.* PROPIOS
 PROSA
 proscivir *v.* ESCRIVANIA 2
 PROSELITO
 PROSODIA
 PROSOPOPEYA
 prosperar *v.* PROSPERO
 prosperidad *v.* PROSPERO
 PROSPERO
 PROSTRARSE
 PROTOCOLO
 PROTOMEDICO
 PROTONOTARIO
 PROTOTYPE
 prova *v.* PRVEVA
 provabilidad *v.* PROVAR
 provable *v.* PROVAR
 provança *v.* PROVAR
 PROVAR
 PROVECHO
 provechoso *v.* PROVECHO
 proveedor *v.* PROVEER
 PROVEER
 proveido *v.* PROVISION; PROVEER
 PROVERBIO
 PROVINCIA
 PROVISION 1, 2 (PROVEER)
 PROVIDOR
 PRVDENCIA
 prudente *v.* PRVDENCIA
 PRVEVA
 pu *v.* HEDER
 PVBLICAR
 publicidad *v.* PVBLICAR
 publico *v.* PVBLICAR
 PVCELANA
 PVCERDAN
 pucheritos *v.* PVCHERO;
 EMBOTIJAR
 PVCHERO
 PVCHES

PVEBLO
 PVENTE 1, 2, 3, 4
 PVERCA (APORCAR)
 PVERCO 1, 2 (GIRA)
 puerco montes *v.* MONTES;
 IAVALI
 PVERICIA
 PVERRO (CANA; PORRETAS)
 PVERTA 1, *s.* PORRETAS
 PVERTA 2, 3
 puerta falsa *v.* POSTIGO
 PVERTO 1, 2, 3 (PVERTOS)
 PVERTOS
 PVESTO
 puja *v.* PVJAR
 PVJAMIENTO
 PVJANTE
 PVJAR
 PVJAVANTE
 PVJO
 PVLGA
 pulgada *v.* PVLGAR
 PVLGAR
 pulgarada *v.* PVLGAR
 pulgon *v.* BROÇA; PVLGA
 PVLIDERO
 PVLIDO
 PVLILLA
 pulimiento *v.* PVLIDO
 PVLMON
 PVLPA
 PVLPEJO
 PVPLPITO
 PVLPO
 PVLSO
 PVLLA
 PVNÇAR
 PVNÇON
 PVNTA (COLLAR)
 PVNTACION
 puntada *v.* PVNTA
 PVNTAL

PVNTAR
 PVNTERA
 PVNTERIA
 puntero *v.* PVNTO
 PVNTIAGVDO
 püntillas *v.* PVNTA
 puntillazo *v.* PVNTA
 PVNTO (AS)
 PVNTVAL
 puñada *v.* PVÑO
 puñal *v.* PVÑO
 puñalada *v.* PVÑO
 puñete *v.* PVÑO
 PVÑO
 PVÑOS
 pupilage *v.* PVPILO
 PVPILO
 purga *v.* PVRGAR
 purgacion *v.* PVRGAR
 PVRGAR
 purgativo *v.* PVRGAR
 PVRGATORIO
 puridad *v.* PVRO
 purificacion *v.* PVRO
 purificador *v.* PVRO
 purificar *v.* PVRO
 PVRO
 PVRPVRA (CARDENAL)
 purpureo *v.* PVRPVRA
 pusilanimidad *v.* ANIMAL
 pusilanimio *v.* ANIMAL
 PVTA
 PVTERIA
 PVTO
 pyrolo *v.* HARDA
 pythonico *v.* APITONARSE

Q

Q
 QVADERNAS
 QVADERNO
 QVADRA

cuadrado *v.* QVADRA
 QVADRANTE
 cuadrar *v.* QVADRA
 QVADRIGA
 QVADRILLA
 QVADRILLEROS
 QVADRO (QVADRA)
 QVADRVPEDES
 QVAJADA
 QVAJAR
 quajarejo *v.* QVAJAR
 QVAJARON
 QVAJO
 QVAL
 QVANDO
 QVANTA *s.* QVADRVPEDES
 QVANTIA
 QVANTIDAD
 quantioso *v.* QVANTIA; CANTIDAD
 QVANTO 1, *s.* QVANTA
 QVANTO 2
 QVARENTA
 QVARENTENA
 QVARTA
 quartaguillo *v.* HACA
 QVARTAGO (BORDE; FACA; HACA)
 QVARTAL
 QVARTANA
 quartanario *v.* QVARTANA
 QVARTEAR
 QVARTILLO
 QVARTO 1 (QVATRO)
 QVARTO 2, *s.* QVATRIDIANO
 QVARTON
 qvaternion *v.* QVADERNO
 quadrangular *v.* QVATRANGVLO
 QVATRANGVLO *s.* QVADRILLEROS
 QVATRIDIANO
 QVATRIN
 QVATRO
 quatroepea *v.* QVADRVPEDES
 QVATROTANTO

QVATRO TEMPORAS
 quaxarse *v.* QVAJADA
 QVE
 quebrada *v.* HERIDA
 quebradizo *v.* QVEBRAR
 quebrantaguesso *v.* GVESSO
 QVEBRANTAHVESSO
 quebrantamiento *v.* QVE-
 BRANTAR
 QVEBRANTAR
 quebranto *v.* QVEBRANTAR
 QVEBRAR
 queda *v.* QVEDAR
 QVEDADA
 QVEDAR
 QVEDO
 QVEMAR
 quemazon *v.* QVEMAR
 quemo *v.* COMO
 QVENTA
 QVENTO
 QVERELLA
 querellar *v.* QVERELLA
 querelloso *v.* QVERELLA
 QVERENCIA
 QVERER
 querido *v.* QVERER
 quesadillas *v.* QVESO
 quesera *v.* QVESO
 QVESO
 QVESTION
 QVESTOR
 QVEXA
 quexarse *v.* QVEXA
 QVEXIGO
 quexoso *v.* QVEXA
 QVIÇA
 quicial *v.* QVICIO
 QVICIO (EXE 1)
 QVIEBRA (QVEBRAR)
 QVIEBRO
 QVIEN

QUIENQUIERA
 quietarse *v.* QUIETO
 quiete *v.* QUIETO
 QUIETO
 quietud *v.* QUIETO
 QVILATAR
 quilate *v.* QVILATAR
 QVILMA
 QVILO
 QVILLA (ENCALLARSE)
 QVILLOTRO
 QVINAO
 QVINAS
 QVINIENTOS
 QVINTA
 QVINTAL 1, 2
 QVINTAR
 quinteria *v.* QVINTA
 quintero *v.* QVINTA; ALDEA
 QVINTILLAS
 QVINTO *s.* QVINTAL
 QVINZE
 QVIÑON
 QVIQVIRIQVI
 quiriqui *v.* ESCONDER
 quitacion *v.* QVITAR
 quitança *v.* QVITAR
 QVITAR
 QVITASOL
 quite *v.* QVITAR
 QVIXADA
 quixar *v.* QVIXADA
 QVIXONES
 QVIXOTES (COXIN; GIGOTE)

R

R
 RABADAN
 rabanal *v.* RABANILLO
 RABANILLO
 RABANO
 rabear *v.* RABON

RABEL
 RABI
 RABIA *s.* RAVDAL
 rabiar *v.* RABIA
 rabricorto *v.* RABON
 rabino *v.* RABI
 RABO
 rabo de puerco *v.* ERVATV
 RABON
 rabona *v.* DERRABAR
 raboso *v.* RABON
 RAÇA
 RACIMO
 RACION
 racionero *v.* RACION
 raeduras *v.* RAER
 RAER
 RAFA
 RAFAEL
 RAFEZ
 RAIZ (RAYZES)
 RAJA
 rajeta *v.* RAJA
 rajol *v.* AZVLEJOS
 RALEA
 RALO
 rallar *v.* RALLO
 RALLO
 RAMA
 RAMADAN
 ramal *v.* RAMA
 RAMBLA (COSCOGITA)
 RAMERA
 ramero *v.* RAMA
 ramillete *v.* RAMA
 RAMIRO
 ramo *v.* RAMA
 ramon *v.* RAMA
 ramonear *v.* RAMA
 RANA
 RANACVAJO (RENAQVAJO)
 RANCIO

rancioso *v.* RANCIO
 RANCOR
 RANCHO
 RANDA
 RANILLAS
 rapacejo *v.* ÇANEFA
 rapacería *v.* RAPAZ
 RAPAGON
 RAPAR
 RAPAZ
 RAPIDO
 RAPIÑA
 RAPOSA
 raposería *v.* RAPOSA
 raposo *v.* RAPOSA
 rapto *v.* ARREBATAR
 RAQVETA
 RAS 1, 2
 ras con ras *v.* ARRASAR
 RASAR
 rascadura *v.* RASCAR
 RASCAR
 rascuño *v.* RASGVÑO
 raserá *v.* RASAR; ARRASAR
 RASGAR
 RASGO
 RASGON
 RASGVÑO
 RASO 1, 2 (ARRASAR)
 RASPA
 RASPAR
 RASTILLO
 rastra *v.* ARRASTRAR
 RASTRO 1, 2 (ARRASTRAR)
 RASTROJO
 RATA (RATON)
 RATERO
 RATO
 RATON
 ratonera *v.* RATON
 RAVDAL
 RAYA 1, 2 *s.* RAFEZ (FVLMINAR)

raygon *v.* RAYZES
 RAYO *s.* RAYA 2 (FVLMINAR)
 RAYZES *s.* RAIZ
 RAZA
 RAZON *s.* RACION
 razonable *v.* RAZONAR
 RAZONAR *s.* RAZON
 RE —
 REAL 1, 2 (DINERO)
 REALEJO
 REALENGO
 REATA
 REAZIO *s.* REHENES
 REBAÑO (ARREBAÑAR)
 REBATIR (BATIR 1)
 rebelarse *v.* REBELDE
 REBELDE
 rebeldia *v.* REBELDE
 REBELLIN
 REBENQVE
 REBENTAR
 rebidar *v.* REBITE
 REBITE
 REBOCIÑO
 REBOÇO
 rebolcadero *v.* BOLCAR
 REBOLCARSE (BOLCAR)
 reboltoso *v.* BOLVER
 revolucion *v.* BOLVER;
 REBOLVER 2
 rebolvedor *v.* REBOLVER 2;
 BOLVER
 REBOLVER 1, 2, 3 (BOLVER)
 REBOSAR (BOSAR)
 REBOTE
 rebuelta *v.* REBOLVER 2;
 BOLVER
 rebuelto *v.* REBOLVER 2;
 BOLVER
 rebullir *v.* BVLLIR
 rebusca *v.* REDOXOS
 REBVSCAR 1 *s.* BVSCAR

REBVSCAR 2
 rebusco *v.* REBVSCAR
 rebuxo *v.* REBVSCAR
 rebuznar *v.* REBVSCAR
 rebuzno *v.* REBVSCAR
 RECAER (CAIDA)
 reçagar *v.* ÇAGA
 reçago *v.* ÇAGA
 recaida *v.* RECAER; CAIDA
 RECALCAR
 RECAMAR
 RECAMARA 1, 2 (CAMARA)
 recapitulacion *v.* RECAPITVLAR
 RECAPITVLAR
 RECATARSE (CATAR)
 recato *v.* RECATARSE; CATAR
 RECATON
 RECAVDAR
 recaudo *v.* RECAVDAR
 rececho *v.* ACECHANÇAS
 RECEL *s.* RECIBIR
 RECELARSE *s.* RECEL
 recelo *v.* RECELARSE
 receloso *v.* CELOSO
 recental *v.* CORDERO; RECIENTE;
 REZENTAR
 recentar *v.* RECIENTE; REZENTAR
 recibimiento *v.* RECIBIR
 RECIBIR *s.* RECVSAR
 RECIENTE (REZENTAR)
 RECIO
 RECLAMAR (CLAMOR)
 RECLAMO
 RECLVSION
 recluso *v.* RECLVSION
 RECOBRAR
 RECOGER (COGER)
 RECOGERSE
 RECOGIMIENTO (COGER)
 RECOLETO
 RECOMPENSA (COMPENSAR)

reconciliacion *v.* RECONCILIAR;
 RECONCILIADO
 RECONCILIADO *s.* RECONCILIAR 1
 RECONCILIAR 1, *s.* CONCILIAR
 RECONCILIAR 2
 RECONCILIARSE
 REÇONGAR *s.* RECELARSE
 reçongon *v.* REÇONGAR;
 REZONGAR
 RECONOCER
 recopilacion *v.* RECOPIRAR
 RECOPIRAR
 RECOQVIN
 RECORDAR
 RECOSTARSE (ACOSTAR)
 RECREARSE
 RECRECERSE
 RECVA
 recudimiento *v.* RECVDIR
 RECVDIR
 recuerdo *v.* RECORDAR
 recuero *v.* RECVA
 RECVESTO
 reçumarse *v.* ÇVMO
 recurso *v.* CVRSO
 recusacion *v.* RECVSAR
 RECVSAR
 RECHAZAR (CHAÇA)
 RECHINAR
 rechunbre *v.* CVMBRE
 RED
 REDAÑO
 REDARGVIR
 REDEMIR
 redempcion *v.* REDEMIR
 redemptor *v.* REDEMIR
 redentor *v.* REDEMIR
 REDITO
 REDOBLAR (DOBLEGARSE)
 redoble *v.* REDOBLAR; DOBLE-
 GARSE

REDOMA
 redomado *v.* REDOMA
 REDOMAZO
 redondar *v.* REDONDO
 redondez *v.* REDONDO
 REDONDILLAS
 REDONDO
 redopelo *v.* REDROPELO
 REDOR
 REDOXOS
 REDRO
 redrojo *v.* BRETON
 REDROPELO
 redroxo *v.* REDOXOS
 redroxuelo *v.* REDOXOS
 REDVNDAR
 REDVZIR
 reedificar *v.* EDIFICIO
 refeccion *v.* REFITORIO
 REFERIR
 REFINAR (FINO)
 refino *v.* REFINAR
 refirmar *v.* FIRMA
 refitolero *v.* REFITORIO
 REFITORIO
 REFLORECER
 reformation *v.* FORMAR
 reformador *v.* FORMAR
 REFORMAR (FORMAR)
 REFORMARSE
 REFRAN
 REFREGAR (FREGAR)
 refregon *v.* FREGADERO
 REFRENAR
 refrenarse *v.* FRENO
 REFRESCAR
 refrescarse *v.* FRESCO
 refresco *v.* REFRESCAR
 refriega *v.* FREGADERO
 REFRIGERAR
 refrigerio *v.* REFRIGERAR
 REFVGIO

REFVNFBVÑAR
 REGAÇO
 REGADIO
 REGAIFA
 regalador *v.* REGALO
 REGALARSE (REGALO)
 regalillo *v.* REGALO; MANGA 3
 REGALIZA
 regalizia *v.* OROZVZ
 REGALO
 regalon *v.* REGALO
 REGAÑAR
 REGAR
 REGATA
 regatear *v.* REGATON 2
 REGATON 1, 2
 regazo *v.* ARREGAZAR
 regencia *v.* REGIR
 regente *v.* REGIR
 regidor *v.* REGIR
 regio *v.* BASILICON
 REGION
 REGIR
 REGISTRAR
 REGISTROS (REGISTRAR)
 REGLA
 reglar *v.* REGLA
 REGOCIJARSE
 regodearse *v.* REGODEO
 REGODEO
 regoldano *v.* REGVELDO
 REGOLDAR
 regolfar *v.* REGOLFO
 REGOLFO
 regozijarse *v.* GOZO
 regozijo *v.* REGOCIJARSE; GOZO
 REGVELDO
 REGVLAR 1, 2
 REHAZER
 rehecho *v.* REHAZER
 REHENCHIR (ENCHIMIENTO)
 REHENES

REHVNDIR
 REHVSAR
 REIERTA
 REJA 1, 2
 REJA 3, s. REVOLVCION
 REJALGAR (ARSENICO)
 REJO 1, 2
 REJVELA
 RELACION
 relamado *v.* LAMEDOR 2
 relamerse *v.* LAMEDOR 2
 RELAMIDO
 RELAMPAGO
 RELAMPAGVEAR
 RELATOR
 RELEVAR
 RELICARIO
 RELIEVE
 RELIEVES
 RELIGION
 RELIGIOSO
 relinchar *v.* RELINCHO
 RELINCHO
 RELIQUIAS
 RELOX
 RELVMBRAR
 RELVZIR
 rellanarse *v.* LLANO
 RELLENAR (LLENO)
 RELLENO (LLENO)
 REMACHAR
 REMANECER
 REMANENTE
 REMANSO
 REMAR (REMO 2)
 REMATAR
 REMATE
 REMEDAR
 REMEDIAR
 remedio *v.* REMEDIAR
 remembrança *v.* MEMBRARSE;
 REMEMBRAR

REMEMBRAR
 REMENDAR
 remendon *v.* REMENDAR
 REMERO s. REMO 2 (REMO 1)
 REMESA
 REMESAR
 REMESON 1, 2 (ARREMETTER)
 REMETER
 remiendo *v.* REMENDAR
 remisible *v.* REMITIR
 REMISION (REMITIR)
 remisó *v.* REMISON
 REMITIR
 REMITIRSE
 REMO 1 s. REMANSO
 REMO 2
 REMOÇARSE
 REMOJAR
 REMOLCAR 1, s. REMAR
 REMOLCAR 2
 REMOLINO 1, 2
 REMONTAR (MONTON)
 REMORA
 REMORDER
 remordimiento *v.* REMORDER
 REMOSTAR
 REMOVER
 REMPVJAR (EMPVJAR)
 REMPVJON (EMPVJAR)
 REMVDAR (MVDABLE)
 REMVLCAR
 REMVNERAR
 RENAQVAJO (RANACVAJO)
 RENASCEER
 RENCILLA
 RENCILLO
 rencilloso *v.* RENCILLA
 RENCO (DERRENGAR)
 RENCOR
 RENDIRSE
 RENDON
 renegado *v.* RENEGAR

RENEGAR
 RENES
 RENGLO (REGLA)
 RENIEGO
 RENOMBRE
 renovar *v.* RENOMBRE
 RENQUEAR *s.* RENCO (CIAR)
 RENTA
 rentero *v.* RENTA
 rentilla *v.* RENTA
 renuevo *v.* RENOMBRE
 renunciacion *v.* RENVNCIAR
 RENVNCIAR
 RENZILLA
 renzilloso *v.* RENZILLA
 REÑIR *s.* RENGLO
 REO
 REPAPILARSR
 reparacion *v.* REPARAR
 REPARAR
 reparo *v.* REPARAR
 repartidor *v.* REPARTIR
 repartimiento *v.* REPARTIR
 REPARTIR
 REPELAR
 REPELO
 repelon *v.* REPELAR; VIEJO 1
 REPENTINO
 repetente *v.* ENDECHAS
 repeticion *v.* REPETIR
 REPETIDOR
 REPETIR
 repicapunto *v.* REPICAR
 REPICAR 1, 2
 repique *v.* REPICAR 1
 repizco *v.* REPICAR 2
 REPLICAR
 REPOLLO
 REPONER
 REPORTARSE
 REPORTORIO
 reposar *v.* REPOSO

repositorio *v.* REPORTORIO
 REPOSO
 reposteria *v.* REPOSTERO
 REPOSTERO
 REPREHENDER
 represa *v.* REPRESAR
 REPRESAR
 representacion *v.* REPRESENTAR
 representantes *v.* REPRESENTAR
 REPRESENTAR
 REPRIMIR
 reprochar *v.* REPROCHE
 REPROCHE
 REPROVAR (APROBAR)
 reptar *v.* REPTO
 REPTO
 REPUBLICA
 republico *v.* REPUBLICA
 REPVDO
 repuesto *v.* REPOSTERO
 repugnancia *v.* REPVGNAR
 repugnante *v.* REPVGNAR
 REPVGNAR
 REPVLGAR
 repulgo *v.* REPVLGAR
 reputacion *v.* REPVTAR
 REPVTAR
 REQVA
 REQVEBRAR
 requerimiento *v.* REQVERIR
 REQVERIR
 REQVERO *s.* REQVA
 REQVESON
 REQVESTA
 requestar *v.* REQVESTA
 requesto *v.* REQVESTA
 requiebro *v.* REQVEBRAR;
 QVIEBRO
 REQVIERO
 REQVISITORIA
 RES 1, 2 (COSA)
 RESABER

RESABIO
 resbaladero *v.* RESBALAR
 RESBALAR
 RESCATAR
 rescate *v.* RESCATAR
 rescoldar *v.* RESCOLDO
 RESCOLDO
 RESCRIBIR
 rescribir *v.* ESCRIVANIA 2
 RESEÑA
 reserva *v.* RESERVAR
 reservacion *v.* RESERVAR
 RESERVAR
 RESFRIAR
 RESGVARDO (GVARDIAN)
 RESIDENCIA
 residente *v.* RESIDIR
 RESIDIR
 RESIGNAR
 RESINA
 RESISTENCIA
 RESISTERO
 RESISTIR
 resolucion *v.* RESOLVER
 resolutio *v.* RESOLVER
 RESOLVER
 RESOLLAR
 RESONAR
 respetable *v.* RESPETO
 respetar *v.* RESPETO
 RESPETIVAMENTE
 RESPETO
 RESPIRACION (ESPITITVAL)
 respiradero *v.* ESPIRITVAL;
 RESPIRACION
 RESPIRAR (ESPIRITVAL)
 RESPLANDECER
 resplandeciente *v.* RESPLAN-
 DECER
 resplandor *v.* RESPLANDECER
 RESPONDER
 RESPONSO

responsorio *v.* RESPONSO
 respuesta *v.* RESPONDER
 RESQVEBRADVRA
 RESQVEBRAJO *s.* REQVEBRAR
 (RESQVEBRADVRA)
 RESQVICIO (QVICIO)
 resquite *v.* QVITAR
 RESTANTE
 RESTAÑAR
 RESTAR
 RESTAVRAR
 restitucion *v.* RESTITVIR
 RESTITVIR
 RESTO
 RESVCITAR
 resuello *v.* RESOLLAR
 RESVLTA
 resultar *v.* RESVLTA
 RESVRECCION
 RESVALAR
 RETABLO
 RETAÇO
 RETAGVARDA (AVANGVARDIA)
 retajado *v.* RETAJAR; CIRCUN-
 CIDAR
 RETAJAR
 retal *v.* RETAÇO
 retama *v.* ESPARTO; GINESTA;
 RETAJAR
 RETARDAR
 retazar *v.* DESTAZAR
 RETEJAR
 RETENER
 RETEÑIR
 RETESADO
 RETINTE
 retirada *v.* RETIRAR
 RETIRAR
 RETO
 RETOÇAR
 retoçon *v.* RETOÇAR
 RETOÑAR

retoño *v.* RETOÑAR
 RETOR
 RETORCER
 retorcimiento *v.* RETORCER
 retorcion *v.* RETORCER
 retoria *v.* RETOR
 RETORICA
 retornar *v.* RETORNO
 RETORNO
 retortero *v.* RETORCER; TORTERA
 RETRAER
 retraimiento *v.* RETRAER
 retratador *v.* RETRATO
 RETRATO
 RETRETE
 retular *v.* RETVLO
 RETVLO (ARROLLAR)
 returto *v.* RETORCER
 REVMA (ROMADIZO)
 reumatico *v.* ROMADIZO
 revanada *v.* REVAÑAR
 REVAÑAR
 REVAÑO
 revelacion *v.* REVELAR
 REVELAR
 REVENDER 1
 REVENDER 2, *s.* VENTA 1
 REVENIRSE
 REVENQVE (REBENQVE)
 REVENTAR (REBENTAR)
 reventon *v.* REVENTAR
 REVERDECER
 REVERENCIA
 reverendo *v.* REVERENCIA
 REVERSO
 REVESAR (TROCER)
 REVESTIR
 REVIVIR *s.* REBITE
 REVOCAR
 REVOLVCION
 rexuela *v.* BRASA
 REY *s.* REHVSAR

rey Don Alonso *v.* ESCVELA
 REYES DE ARMAS *s.* REY
 REZAR 1, 2
 REZENTAR
 REZIO
 REZMA
 REZNO
 rezo *v.* REZAR 2
 REZONGAR (REÇONGAR)
 rhinoceronte *v.* BADA
 RIA 1
 RIA 2, *s.* RIO
 riachuelo *v.* RIA 2
 RIBA
 RIBADOQVIN
 RIBAZO (ARRIBA)
 RIBERA
 RIBETE
 RICLA
 RICO
 RIÇO
 RIEL
 RIENDA 1 *s.* RENDIRSE
 RIENDA 2
 RIEPTO
 RIESGO
 RIFA
 RIFAS
 rigido *v.* RIGOR
 RIGOR
 rija *v.* RIXA
 RIMA
 RINCON (ANGVLO)
 RINGLON
 RINOCERONTE (BADA)
 RIÑA
 riñonada *v.* RIÑONES 1
 RIÑONES 1, *s.* RENES
 RIÑONES 2
 RIO
 río tinto *v.* AZECHE
 RIOJA
 RIOSTRAS

ripia *v.* RIPIO

RIPIO

RIPONZE

RIQVEZA (RICO)

RISA

RISCO

rismoso *v.* CHISME

RISTRA

RISTRE

RITO

RIVAL

RIXA

rixoso *v.* RIXA

RIZA

rizar *v.* ERIZARSE

RIZO (ERIZARSE)

ro *v.* ARRULLARSE

ROBA

robador *v.* ROBAR

ROBAR

roble *v.* ROBRE

ROBRA

robrar *v.* ROBRA

ROBRE

ROCA

ROCADERO (RVECA)

ROCIN (CAVALLO)

RODABALLO

rodajuela *v.* ESTORNIJA

RODAR

rodear *v.* RODEO

RODELA

rodelero *v.* RODELA

RODEO

RODETE

RODILLA 1, 2 (HINOJOS)

RODILLO

rodrigar *v.* RODRIGON

RODRIGO

RODRIGON

ROER

ROGAR

rogativa *v.* ROGAR

ROJO

ROLLO 1, 2 (ARROLLAR; HORCA)

ROMA

romadigado *v.* ROMADIZO;

CATARRO

romadizado *v.* CATARRO

ROMADIZO (CATARRO)

ROMANA

ROMANCE (LATIN; LAVD)

ROMAZA

romeria *v.* ROMERO 1; VENERA

ROMERO 1, s. ROMA

ROMERO 2

ROMO

ROMPER

rompimiento *v.* ROMPER

RONCAR

RONCEAR

RONCERIAS

RONCESVALLES

ronco *v.* RONCAR

RONDA 1, 2

rondon *v.* RENDONronquera *v.* RONCARronquido *v.* RONCARronzero *v.* RONCEAR

ROÑA

roñoso *v.* ROÑA

ROPA

ropavejero *v.* ROPA; VIEJAroperia *v.* ROPAropero *v.* ROPA

ROQVE s. ROCADERO

roquero *v.* ROCA

ROQVETE

ROSA

rosado *v.* ROSArosal *v.* ROSA

ROSARIO

ROSAS

ROSCA

ROSILLON
 ROSO
 rosquilla *v.* ROSCA
 rostituerto *v.* ROSTRO; TVERTOS
 ROSTRO
 ROTO (ROMPER)
 ROTVLO (CVERNO; RETVLO;
 ARROLLAR)
 ROXO
 rozal *v.* ALTOZANO
 ROZAR 1, *s.* ROQVE
 ROZAR 2
 ROZIN
 ROZIO *s.* ROCIN
 rozongero *v.* RONCAR
 RVA
 RVANO
 RVAR
 RVBI
 RVBIA
 RVBIO
 RVBRICA
 ruca *v.* ORVGA
 RVDA
 RVDO (BASTON 3)
 RVECA
 RVEDA (GORRA)
 RVEDO (FILATERIA)
 RVEGO (ROGAR)
 RVFIAN
 RVFIANESCA
 RVGA
 RVGIR
 RVI
 RVIBARBO
 RVIDO
 RVIN
 RVINA
 RVIPONCE
 ruipontico *v.* CENTAVRA
 RVESELLON
 RVISEÑOR

rumba *v.* DERROTA
 RVMO
 RVMIAR
 RVMOR
 RVQVETA
 rusco *v.* BRVSCO
 ruso *v.* IVSBARBA 1
 RVSTICO
 RVTILANTE
 RVVIO

S

SABADO
 sabalo *v.* SABOGA
 SABER
 SABINA
 SABIO
 SABOGA
 sabor *v.* SABIO
 SABOYANA
 sabroso *v.* SABIO
 SABVESO
 SACA
 sacabocados *v.* BOCADO
 SACABVCHE
 sacaliña *v.* SACA; GARROCHA
 SACAR
 SACERDOTE
 SACO (CASACA; CILICIO; IACO)
 SACRE
 SACRIFICAR
 sacrificio *v.* SACRIFICAR
 SACRILEGIO
 SACRISTAN
 sacristia *v.* SACRISTAN
 sacudimiento *v.* SACVDIR
 SACVDIR
 saculario *v.* IVEGO 2
 SAELIZES
 SAETA
 saetera *v.* SAETA
 SAFIRO

SAGAZ
 sage *v.* SAYN
 sagitario *v.* SAETA
 SAGRA
 sagrario *v.* SACRISTAN
 SAGVNT0 (MONVIEDRO)
 SAHAGVN
 sahumador *v.* SAHVMERIO
 sahumar *v.* SAHVMERIO
 SAHVMERIO
 sajada *v.* SAJAR
 SAJAR
 SAL (GVSTO)
 SALA
 SALABREÑA
 SALAMANCA
 SALAMANDRA
 salamanquesa *v.* SALAMANDRA
 SALARIO
 SALCHICHA (CHICHA)
 salchichon *v.* SALCHICHA;
 CHICHA
 saledizo *v.* SALIDA
 SALERO
 SALGADA
 SALIDA
 SALINAS
 SALIR (SALIDA)
 SALITRE
 SALIVA (SALVDAR)
 salma *v.* XALMA
 salmear *v.* SALMO
 salmista *v.* SALMO
 SALMO
 SALMON
 salmonete *v.* SALMON; TRILLA
 SALMOREJO
 SALMVERA (ESCABECHE)
 SALOBRE
 SALOBREÑA
 SALPA
 SALPICAR

SALPICON
 salpimentar *v.* PIMIENTA
 SALPRESA
 salpresado *v.* SALPRESA
 salpuga *v.* HORMIGA
 SALSA
 salsera *v.* SALSA
 salserilla *v.* SALSA
 SALSSES
 SALSIFRASIA
 saltaenbanchi *v.* CHARLATAN
 saltaenvanca *v.* VANCA
 saltambanchi *v.* BANCA 2
 SALTAR
 salteador *v.* SALTEAR; FORAGIDO
 SALTEAR
 SALTERIO (SALMO)
 salto *v.* SALTAR
 salto de la trucha *v.* BOLTEAR
 SALVD
 saludable *v.* SALVDAR
 saludador *v.* SALVDAR
 SALVDAR
 saludarse *v.* SALVTACION
 SALVTACION
 salutifero *v.* SALVDAR
 SALVA 1, 2 s. SALVOCONDVTO
 salvador *v.* SALVAR
 SALVADOS
 SALVAGE
 salvagina *v.* SALVAGE
 SALVAMENTO
 SALVANTES
 SALVAR
 SALVATIERRA
 SALVIA
 salvilla *v.* SALVA 2
 SALVOCONDVTO s. SALVAMENTO
 SAMARITANO
 SAMBENITO (BENITO)
 sambuca *v.* CAMPONA

SAMVGAS
 SANAR (SANO)
 SAN BAVDVLIO *v.* BOAL
 SAN BENITO (SACO)
 sancochada *v.* CHICHA
 SANCHO
 SANCHOS
 SANDALIO
 SANDALOS
 sandaraca *v.* ARSENICO
 SANDIOS
 San Elizes *v.* SAELIZES
 San Gil *v.* EGIDIO
 sangraça *v.* SANGRE
 sangradera *v.* SANGRE
 sangrar *v.* SANGRE
 SANGRE (SANGVINARIA)
 SANGRE DE DRAGO *s.* DRAGONTEA
 sangre lluvia *v.* FLVXO
 sangria *v.* SANGRE
 sangriento *v.* SANGRE
 SANGVINARIA
 SANGVISVELA
 San Iorge *v.* VALLESTA
 San Lino *v.* LINARES
 SANLVCAR DE BARRAMEDA
 San Nofre *v.* IOFRE
 SANO
 SAN SEBASTIAN
 SAN SERVANTES *s.* SAMBENITO
 SANTA MARIA
 SANTANDER
 SANTARIN
 SAN TELMO
 SANTERO
 SANTIAGO
 santiamen *v.* AMEN
 santiguadero *v.* SANTIGVAR
 SANTIGVAR
 SANTILLANA
 San Tirso *v.* SANTIS
 SANTIS

SANTISTEVAN
 SANTO
 SANTO DOMINGO *s.* DOMINGVILLO
 Santo Tis *v.* SANTIS
 SANTVARIO
 SAÑA
 sapino *v.* CHAPIN
 SAPO (ESCVERZO)
 SAQVEAR
 SARAMPION
 SARCIA
 SARDINA
 SARDO
 SARDONICA
 SARGENTO
 SARGO
 SARMENTAR
 sarmentera *v.* SARMENTAR
 SARMIENTO
 SARNA (GAFO)
 SARNOSO
 SARPVLLIDO
 SARRA (SARRACENOS)
 SARRACENOS
 SARRIA
 SARRO
 SARTA
 SARTEN
 SASTRE
 SATAN
 satanas *v.* SATAN
 SATIRA
 SATIRICO (SATIRA)
 SATIRION
 SATIROS
 SATISFAZER
 satisfecho *v.* SATISFAZER
 SATRAPA
 SAVCE
 SAVCO
 sauz *v.* SAVCE
 sauz gatillo *v.* AGNOCASTO

SAVZEDA
 SAVALO
 SAVANAS
 SAVANDIJA
 SAVAÑON
 SAXAR
 SAXIFRAGVA
 saya *v.* SAYO; FALDA
 sayago *v.* SACO
 sayal *v.* SACO
 SAYN *s.* SAYO
 saynete *v.* SAYN
 SAYO *s.* SAHVMERIO
 sayon *v.* SACO; SAYN; BIRRHOS:
 CASACA
 sayuelo *v.* SAYO
 SAZON
 sazonado *v.* SAZON
 scabila *v.* ACIBAR
 scabira *v.* ACIBAR
 scariola *v.* ESCAROLA
 scenopegia *v.* CENA
 sciatica *v.* CADERA
 SEBASTIAN
 SEBO
 SEBOSO
 SECA (LANDRE)
 SECAR
 SECAS
 SECRESTAR
 SECRESTO
 secreta *v.* LATRINA
 secretaria *v.* SECRETARIO
 SECRETARIO
 SECRETAS
 SECRETO (SECRETAS)
 SED
 SEDA
 sedaço *v.* CERDA
 SEDAL (CERDA)
 SEDICION
 SEDICIOSO

sediento *v.* SED
 seer *v.* ASEO
 segador *v.* SEGAR
 SEGAR
 SEGLAR (SIGLO)
 SEGOVIA
 SEGRE
 seguimiento *v.* SEGVIR
 SEGVIR
 SEGVN
 SEGVNDO
 SEGVR
 SEGVRA
 SEGVRO
 SEIS
 SELVA
 SELLO 1, 2
 SEMANA
 semaneria *v.* SEMANA
 semanero *v.* SEMANA
 SEMBLANTE
 semble *v.* ENSAMBLAR
 semblea *v.* ENSAMBLAR
 sembrado *v.* SEMBRAR
 SEMBRAR
 semejança *v.* SEMEJAR
 semejante *v.* SEMEJAR
 SEMEJAR
 SEMIRAMIS
 SEMOLA
 SEN
 SENADO
 sencillez *v.* SENCILLO
 SENCILLO
 SENDA
 sendero *v.* SENDA
 SENECTVD
 SENESCAL
 SENO
 SENOGIL
 SENTAR
 SENTENCIAR

sentido *v.* SENTIR
 sentimiento *v.* SENTIR
 SENTINA
 SENTIR
 SEÑA
 SEÑAL
 señalarse *v.* SEÑAL
 SEÑOR
 señorear *v.* SEÑORIA
 SEÑORIA
 señorío *v.* SEÑORIA
 SEÑVELO
 SEPVLICRO
 SEPVLTVRA
 SEPVLVEDA
 SEQVEDAD
 SER
 SERA
 SERAFIN
 SERAO
 SERAPINO
 SERAPIS
 serenar *v.* SERENO
 SERENISSIMO
 SERENO
 SERGVE
 SERIA
 seriola *v.* ESCAROLA
 SERMON
 sermonario *v.* SERMON
 sermonear *v.* SERMON
 SEROJAS (HOJA 1)
 SERON
 SERPENTINA *s.* SIERPE
 SERPIENTE (CVLEBRA)
 SERPOL
 SERRANIA
 SERVAl
 servicio *v.* SERVIR
 servidor *v.* SERVIR
 servidumbre *v.* SERVIR
 servil *v.* SERVIR

SERVILLAS (CALÇADO)
 SERVILLETA (MANTELES)
 SERVIR
 SESENTA
 SESMA
 SESO (CASCOS)
 SESTEAR
 sesudo *v.* SESO
 SETA 1, 2 (XETA)
 SETENAS
 SETENTA 1, 2
 SETIEMBRE
 SETO
 SETVBAL
 seu *v.* SILLA; CATEDRAL
 SEVERO
 SEVILLA
 SEVILLANO
 SEVO
 SI
 SICANIA
 SICILIA 1 *s.* CICATRIZ
 SICILIA 2
 SICILIANOS
 sicla *v.* AZELGA
 SICLO
 sicula *v.* AZELGA
 SIDONIA
 SIDRA
 siega *v.* SEGAR
 siembra *v.* SEMBRAR
 SIEMPRE
 SIEMPREVIVA (PVNTERA)
 SIEN
 SIERPE
 SIERRA 1, 2
 SIERRA DE ALCARAZ
 SIERRA DE GATA
 SIERRA DE GRANADA
 SIERRA DE SEGVRA
 SIERRA MORENA
 SIERRA NEVADA

SIERVO
 SIESO
 SIESTA (RESISTERO)
 SIETE
 siete colores *v.* SIRGVERO
 sietemesino *v.* MES
 SIGES
 SIGILO
 SIGILLATA TERRA
 sigillo *v.* SELLO 2
 SIGLO
 SIGNIFICAR
 SIGNO
 SILABA
 silenciario *v.* CONSEJEROS
 SILENCIO
 silicio *v.* IACO
 SILO (ENSILAR)
 SILOS
 SILVA
 silvato *v.* SILVO
 SILVESTRE
 SILVO
 SILLA
 SILLAR
 sillon *v.* SILLA
 SIMA
 SIMACO
 SIMANCAS
 simbolico *v.* SIMBOLO
 SIMBOLIZAR
 SIMBOLO
 SIMIA
 SIMIENTE
 simon *v.* DELFIN
 SIMONIA
 SIMONIACO
 SIMPATIA
 SIMPLE
 simplicista *v.* SIMPLE
 simplon *v.* SIMPLE
 SIMPOSIO

SIN
 SINABABA
 SINAGOGA (IGLESIA)
 SINCEL
 SINDICO
 SINFONIA
 SINGVLAR
 singularizarse *v.* SINGVLAR
 singularidad *v.* SINGVLAR
 SINIESTRA
 SINIESTRO
 sino *v.* NO
 SINODO
 sinodontil *v.* CORVINA
 SINONOMOS
 SINTAGMA
 SINTAXIS
 SION *s.* IERUSALEM
 SIRENAS
 SIRGA
 sirgero *v.* GIRGERO
 SIRGO
 SIRGVERO
 SIRIA
 SIRINGA
 SIRTES
 SIRVENTE
 sisa *v.* SISAR
 SISAR
 sisaro *v.* CHIRIVIA
 sitiar *v.* SITIO
 SITIO
 SITVAR
 SIVILLA *s.* SI
 SO
 SOBACO
 SOBAJAR
 SOBAQVINA
 sobarbada *v.* BARBADA
 sobarcado *v.* SOBACO
 sobarcar *v.* ABARCAR
 SOBEJANO *s.* SOBAJAR

SOBERANO
 soberbio *v.* SOBERVIA
 SOBERVIA
 SOBORNAL
 SOBORNAR
 SOBRA
 SOBRADO (SOBRA)
 SOBRE
 sobrecalça *v.* CALÇAS
 sobrecarta *v.* CARTA
 sobrecejo *v.* CEJA
 sobreguesso *v.* GVESSO
 sobrehuesso *v.* SOBRE
 sobrehusa *v.* CAPIROTADA
 sobrenombre *v.* SOBRE
 sobrepujar *v.* SOBRE
 sobrescrito *v.* ESCRIVANIA 2
 sobrescribir *v.* ESCRIVANIA 2
 sobreser *v.* SOBRE
 sobrestante *v.* Estante
 sobreusa *v.* SOBRE; CAPIROTADA
 sobrevenir *v.* SOBRE
 sobrina *v.* SOBRINO
 SOBRINO
 SOBRIÓ
 SOCARRAR
 SOCARREN
 SOCARRENA
 SOCARRON
 SOCAVAR
 so cesto *v.* CORDERO
 SOCORRER
 socorro *v.* SOCORRER
 SOCROCIO (PITIMA)
 sochantre *v.* CAPISCOL
 SODA
 SOFALDAR
 SOFISTA (FILOSOFO)
 sofrenada *v.* SOFRENDIA; FRENO
 SOFRENDIA
 SOGA
 SOGORBE

SOHEZ
 SOJUZGAR
 SOL
 SOLANA (AÇVTEA)
 solano *v.* SOLANA
 SOLAPAR
 solapo *v.* SOLAPAR
 SOLAR (BVRGO)
 SOLAZ
 SOLAZAR
 SOLDADA
 soldadesca *v.* SOLDADO
 SOLDADO
 SOLDAN
 SOLDAR
 SOLECISMO
 SOLEDAD
 SOLEMNE
 solemnizar *v.* SOLEMNE
 SOLER
 soleta *v.* LENGVADO
 solicitador *v.* SOLICITAR
 SOLICITAR
 SOLICITO
 SOLIDO
 SOLIMAN
 SOLITARIO
 SOLIVIAR
 solivio *v.* SOLIVIAR
 SOLO
 solomo *v.* LOMO
 solsobaco *v.* SOBACO
 SOLTAR
 soltero *v.* SOLTAR
 soltura *v.* SOLTAR
 SOLLAMAR
 SOLLO
 SOLLOZAR
 soma *v.* ASSOMAR
 SOMBRA
 SOMBRERERA

sombrero *v.* SOMBRA; GORRA
 sombrío *v.* SOMBRA
 SOMERO
 SOMETER
 SOMETICO
 SOMO (ASSOMAR; ZOMAS)
 SOMORGVJO
 SON
 SONADA
 SONAJAS
 SONAR
 SONARSE
 SONTA (BOLINA)
 sonido *v.* SON
 SONORO *v.* SONARSE
 SONREIRSE
 SONSACAR (ASACAR)
 SOÑAR
 soñoliento *v.* SVEÑO
 SOPA
 SOPAPO (PAPIROTE)
 sopear *v.* SOPA
 SOPETON
 SOPETRA
 SOPLAR
 soplillo *v.* SOPLAR
 soplo *v.* SOPLAR
 soplon *v.* SOPLAR; CHISME
 SOPORTAR
 SOR
 SORBO *s.* SORTEAR
 SORCE
 SORDO
 SORIA
 SORNA (SORRA)
 SORRA *s.* SOR
 sottero *v.* SORRA
 SORTEAR
 SORTIJA 1, 2 (ANILLO)
 SORVER
 SOSA 1, 2
 SOSEGAR

SOSIA
 sospecha *v.* SOSPECHAR
 SOSPECHAR
 sospechoso *v.* SOSPECHAR
 SOSPIRAR (ESPIRITVAL)
 SOTA
 sota comitre *v.* SOTA
 SOTANA
 sotanado *v.* SOTANO
 sotanilla *v.* SOTANA
 SOTANO
 SOTERRANEO
 SOTERRAR
 SOTIL
 SOTO
 SOVAR
 SOVINA
 spherico *v.* ESFERA
 sphinge *v.* ESFINGE
 strige *v.* BRVXA
 struma *v.* LAMPARON
 SVAVE COSA
 subdelegado *v.* LEGADO
 SVBITO
 subida *v.* SVBIR
 subidor *v.* SVBIR
 subiecto *v.* SVGETO
 SVBIR
 SVBITA COSA 1
 SVBITA COSA 2, *s.* SVPERSTI-
 CIOSO
 subitaneo *v.* SVBITA COSA 1
 subito *v.* SVBITA COSA 1
 sublimar *v.* SVBLIME
 SVBLIME
 SVBRETICIO
 SVCEDER 1, 2
 suceso *v.* SVCEDER 1
 SVCIEDAD *s.* SVCIO (CVZIO)
 SVCIO *s.* SVSTO
 SVDAR
 SVDARIO

SVDITO
 SVEGRA
 SVEGRO
 SVELA
 SVELDA
 SVELDO
 SVELO
 SVELTA COSA
 sueltas *v.* SVELTA COSA
 suelto *v.* SVELTA COSA
 SVEÑO 1 s. SEÑOR
 SVEÑO 2 (SOÑAR)
 SVERO 1, 2
 SVERTE
 SVFRAGANEO
 SVFRAGIO
 SVFRE
 sufrimiento *v.* SVFRIR
 SVFRIR
 SVGECION
 SVGETAR
 SVGETO
 suggina *v.* BRVXA
 SVGO
 SVGOSO
 SVLCAR
 sulco *v.* SVLCAR
 SVLCONETE
 SVLTAN
 SVMA
 SVMILLER (CORTINA)
 SVMIR
 SVMISION (SOMETER)
 SVMO
 SVNTVOSO
 SVPERFLVO
 SVPERSTICION
 SVPERSTICIOSO
 SVPLEMENTO
 SVPLICA
 SVPLICACION (OBLEA)
 SVPLICACIONES

SVPLICAR
 SVPLIR
 SVPREMO (TIPLE)
 SVRGIR
 surtidor *v.* SVRTIR
 SVRTIR
 SVRZIR
 SVS
 SVSANA
 SUSO *v.* SVS
 SVSPENDER 1, s. PENDER
 SVSPENDER 2
 suspenso *v.* SVSPENDER 2
 SVSPIRO (SOSPIRAR)
 SVSTANCIA 1, 2
 sustancial *v.* SVSTANCIA 2
 sustancioso *v.* SVSTANCIA 2
 SVSTENTAR
 sustento *v.* SVSTENTAR
 SVSTITVIR
 SVSTO
 SVYO s. SVGOSO
 suzio *v.* ÇVZIO
 synomya *v.* SINONOMOS

T

T
 TABACO
 TABAHOLA
 TABANO
 tabardillo *v.* PINTA
 TABERNA
 tabernero *v.* TABERNA
 TABIQUE
 TABLA 1, 2, 3, 4
 tablachin *v.* ESCVDO
 TABLADO (TABERNA)
 TABLAJERO
 TABLILLA 1, 2
 TABOR
 Taborlan *v.* TAMORLAN
 TABVCO

taca *v.* ALACENA; ALHACENA
 TAÇA 1, 2
 TAÇANA
 tacaña *v.* TAÇANA
 TACAÑO
 taçar *v.* DESTAZAR
 TACO
 TACTO
 TACHA
 tachar *v.* TACHA
 TACHON
 tachonada *v.* TACHON
 TACHVELA
 TAFALLA
 TAFETAN
 tafur *v.* TAHVR
 TAGAROTE
 TAHALI
 TAHEÑO
 TAHONA
 TAHVR
 TAIBIQVE
 TAIMADO
 TAITA
 tajada *v.* TAJAR
 TAJADOR
 tajante *v.* TAJAR
 TAJAR
 TAJO
 tajo *v.* TAJAR
 tajon *v.* TAJADOR
 TAJVÑA
 TAL
 TALA
 TALABARTE
 TALABERA DE LA REYNA
 taladrar *v.* TALADRO
 TALADRO
 TALAMO
 TALANQVERA
 TALANTE
 talar *v.* TALA

talatro *v.* BARRENA
 TALEGA
 talegaço *v.* TALEGA
 talegon *v.* TALEGA
 TALENTO
 TALION *s.* TALMVD
 TALMVD
 TALON
 TALQVE
 TALVINAS
 TALLA 1, 2 (ENTALLADOR)
 TALLE
 tallecer *v.* TALLO
 taller *v.* TALLA 1; ENTALLADOR
 TALLERES
 TALLO
 TAMAÑO
 TAMARA
 TAMARAS (DATIL)
 TAMARINDOS (DATIL)
 TAMARIZ
 TAMBIEN
 tamboril *v.* TAMBORINO
 tamborilero *v.* TAMBORINO
 TAMBORILLO
 TAMBORINO
 tamboritero *v.* TAMBORINO
 Tamerlan *v.* TAMORLAN
 tamo *v.* FLVECO
 TAMORLAN
 TAN
 TANDA
 TANGER
 TANTO
 TANTOS
 TAÑER
 TAO
 TAPABOCA
 TAPAR (ATAPAR)
 TAPETADO
 TAPETE (TAPAR)
 TAPIA

tapiador *v.* TAPIA
 tapiales *v.* TAPIA
 tapiar *v.* TAPIA
 TAPIZ
 TARAÇANA
 taracea *v.* EMBLEMA
 TARAÇON
 TARAÇONA
 TARAGONTIA (DARAGONTIA;
 DRAGONTEA)
 TARAI
 tarambola *v.* CARAMBOLA
 TARANTVLA
 TARASCA (DVENDE)
 TARAVILLA
 TARBEA
 tardança *v.* TARDAR
 TARDAR
 TARDE
 tardio *v.* TARDE
 tardon *v.* TARDE
 TAREA
 tarentino *v.* TARENTO
 TARENTO
 TARGETA
 TARGVM
 TARIFA
 TARIMA
 TARIN
 TARJA
 TARQVIN
 TARRAGONA
 TARRENAS
 TARRO
 TARTAGO
 TARTAJOSO
 tartamudo *v.* TARTAJOSO
 TARTANA
 tartaraguelo *v.* BISAGVELO
 TARTARANIE TO
 TARTARAÑETO
 TARTAROS

Tartesso *v.* BÉTIS
 TARVGO
 TASAJO
 TASAR
 tasca *v.* TASCAR
 TASCAR
 TASCOS
 tassa *v.* TASAR
 tassacion *v.* TASAR
 tassador *v.* TASAR
 TAVANO (ISIS)
 TAVAQVE
 TAVARDILLO
 TAZ (DESTAZAR)
 taz por taz *v.* TANTOS
 TAZA
 TAZMIA
 TEA (BODA)
 teatino *v.* IESVS
 TEATRO
 TEBA
 TEBIQVE
 TECLA
 TECHO
 techumbre *v.* TECHO
 TEJA 1, 2
 TEJADO
 TEJAR (TEJERO)
 TEJAROZ
 TEJAZO
 TEJERO
 TEJO
 TEJVELAS
 TELA
 TELAMONES
 TELAR
 TELARAÑA
 TELONIO
 TELLIZ
 TEMA
 tematico *v.* TEMA
 temblador *v.* TEMBLAR

TEMBLAR
 TEMBLOR (TEMBLAR)
 TEMER
 TEMERARIO
 temor *v.* TEMER
 temoroso *v.* TEMER
 temoso *v.* TEMA
 TEMPANO
 TEMPERO
 TEMPESTAD
 tempestuoso *v.* TEMPESTAD
 templança *v.* TEMPLAR
 TEMPLAR
 TEMPLARIOS
 temple *v.* TEMPLAR
 TEMPLO
 TEMPORAL
 TEMPORALIDADES
 TEMPORAS (QVATRO TEMPORAS)
 TEMPRANA
 temprano *v.* TEMPRANA
 TENAÇAS
 tenaquelas *v.* TENAÇAS
 TENCA
 tendedero *v.* TENDER
 TENDEJON
 TENDER
 tendero *v.* TENDER
 tendeson *v.* TIENDA
 TENDILLA
 TENEBROSO
 tenencia *v.* TENIENTE
 TENER
 TENIENTE
 TENOR
 TENTACION
 TENTADOR
 TENTAR
 TENTATIVA
 TEÑIR 1
 TEÑIR 2, *s.* TIÑA
 TEODOSIO

TEOFILO
 TEOLOGIA
 TEORICA
 teorico *v.* TEORICA
 TERCERIA
 TERCERO
 TERCiado
 TERCIANA
 TERCIAS
 TERCIO
 TERCIOPELADO
 TERCIOPELO (TERCIOPELADO)
 TERCO (ALTERCAR)
 TERICIA (ITERICIA)
 TERLIZ
 TERMAS
 TERMENTINA
 terminacion *v.* TERMINOS
 TERMINO (TERMINOS 1; CRITICO)
 TÉRMINOS 1, 2
 termuz *v.* CALDO
 TERNERO
 ternilla *v.* TERNVRA
 TERNVRA
 TERRADO (AÇVTEA)
 TERRAZA
 terremoto *v.* TERREPLENA
 TERRENAL
 TERRENO
 TERREPLENA
 TERREPLENO
 TERRIBLE
 TERRITORIO
 TERRON
 terruño *v.* TERRON
 TERVEL
 tesera *v.* CARNICOL
 TESO 1, 2
 teson *v.* TESO 1
 TESORERIA
 TESORERO
 TESORO

TESTA
 testador *v.* TESTAMENTO
 testamentario *v.* TESTAMENTO
 TESTAMENTO
 TESTAR
 TESTICVLOS
 TESTIGO
 TESTIMONIO
 TESTO
 TETA
 tetona *v.* TETA
 TETRAGONO
 TETRAGRAMMATON
 TETRARCA
 tetrarchia *v.* TETRARCA
 TEVIAMAN *s.* TRVHAN
 TEXA
 TEXAR
 TEXO
 TEXON
 TEZ
 thoro *v.* ESTVPRO
 thymiama *v.* TIMIAMA
 TIA
 TIARA
 TIBER
 TIBIA
 tibio *v.* TIBIA
 TIBVRON
 TIEMPO
 TIENDA
 TIENTA 1 *s.* TENTATIVA
 TIENTA 2
 TIENTO 1, *s.* TIENTA 1
 TIENTO 2
 TIERNA
 tierno *v.* TIERNA
 TIERRA 1, 2
 tierra de Sevilla *v.* AZECHE
 TIERRA SIGILLATA
 TIESTO
 TIGERAS

TIGERETAS *s.* TISERAS
 TIGRE
 tildar *v.* TILDE
 TILDE
 TILLA
 TIMIAMA
 TIMON (GOVERNAR)
 TIMONERO
 TIMPANO (TEMPANO)
 TINA
 tinagilla *v.* TINAJA
 TINAJA
 tinajon *v.* TINAJA
 tinajuela *v.* TINAJA
 TINELO
 tino *v.* ATINAR
 TINTA
 TINIE
 TINTERO
 TINTORERO
 tintura *v.* TINTORERO
 TIÑA
 TIO 1, *s.* TIA
 TIO 2
 TIPLE
 TIPOGRAFO
 TIRA
 TIRABRAGVERO
 TIRADOR
 TIRAFLOJA (FLOJO)
 tiramira *v.* TIRA
 tiranizar *v.* TIRANO
 TIRANO
 TIRANTE
 tirar *v.* TIRA; TIRO 1
 TIRICIA (TERICIA)
 TIRITAÑA
 TIRITAR
 TIRO 1, 2, 3 *s.* TIRA (ARCABVZ)
 TIROS 1
 TIROS 2 (*err. por* TIRSO)
 tirso *v.* TIROS 2

TISERAS
 TISICA
 TISIFONE
 TITERES
 titulillos *v.* TITVLO 3
 TITVLO 1, 2, 3
 tixeretas *v.* TISERAS
 TIZNADO
 TIZNARSE
 TIZNE
 tizon *v.* TIZNADO
 TIZONA
 TO
 TOA
 toba *v.* TVFO
 TOCA
 TOCADO
 tocador *v.* TOCADO
 TOÇAL
 tocante *v.* TOCAR 3
 TOCAR 1, 2, 3 (TACHVELA)
 TOCINO
 TOCON
 TOÇVELO
 TOCHA
 tochedad *v.* TOCHO
 TODA
 TODO
 TOGA
 TOLANOS (HAVA)
 toldillo *v.* TOLDO; SILLA
 TOLDO
 TOLEDO
 TOLODRON
 TOLVA
 TOLLER
 tollir *v.* TVLLIR
 TOLLO
 TOMAR
 TOMAR
 TOMILLO
 TOMIZA (ESPARTO)

tomo *v.* TOMAR
 TONADA (SONADA)
 TONEL
 tonelada *v.* TONEL
 TONO
 TONSVRA
 TONTERIA
 TONTO
 TOÑINA (ATVN)
 TOPACIO
 TOPAR
 tope *v.* TOPAR
 TOPO
 TOPOGRAFIA
 TOQVE
 TORA
 torçal *v.* TORCER
 torcaz *v.* ÇORITA; PALOMA
 TORCAZA
 TORCECVELLO
 TORCEDOR
 TORCEDVRA (LAGAR)
 TORCER
 torcida *v.* TORCER
 TORÇVELO (PRIMA 3)
 TORDESILLAS
 tordillo
 TORDO (ATVRDIR)
 TORIL
 TORMENTA
 TORMENTO
 TORMES
 TORMO
 TORNABODA (BODA)
 TORNADIÇO (CONFESSO)
 TORNAR
 TORNASOL (GIRASOL)
 TORNEAR
 TORNEO (IVSTA)
 tornero *v.* TORNO
 tornillo *v.* DORNAJO
 TORNO (ENTORNAR)

TORO

TORO 1, 2 (TOROS DE GVISANDO)

torondo *v.* CHICHON

TORONGIL

TORONJA

TOROS DE GVISANDO (BERRACO)

TOROTE

TOROZON *s.* TORCEDVRA

TORPE

torpedad *v.* TORPE

TORPEDO (REMORA)

torpeza *v.* TORPEtorqueçuela *v.* PVERCA

TORQVEMADA

TORRE 1, 2 (CARCEL; MADALENA)

TORRE DEL AZEYTE

TORRE DE LODONES

TORREMOCHA

torreznero *v.* TORREZNO

TORREZNO

TORTA

tortada *v.* TORTA

TORTELLA

TORTERA (TORTA; RETORCER)

tortero *v.* TORTERAtortilla *v.* TORTA

TORTOLA

TORTOSA

TORTVGA (GALAPAGO)

TORVELLINO

TORVISCO

TOS

TOSCANA

toser *v.* TOS

TOSIGO

tostada *v.* TOSTAR

TOSTADO

TOSTAR

TOSTONES

TOVA 1, 2

tovaja *v.* TOVALLAS

TOVALLAS (TOVA 1)

TOVAZO

TOVILLO

TRABAJADO

trabajador *v.* TRABAJADO;

TRABAJO

TRABAJAR

trabajarse *v.* TRABAJADO

TRABAJO

TRABVCO

traça *v.* FABRICAtracista *v.* TRAZAR

TRACTO

TRADVCIÓN

tradutor *v.* TRADVCIÓN

TRADVZIR

TRAER

traerse *v.* TRAJEtrafagar *v.* TRAFAGO

TRAFAGO

trafagon *v.* TRAFAGOtragaçon *v.* TRAGARtragadero *v.* TRAGARtragamalla *v.* MALLA

TRAGAR

tragavirotos *v.* VIROTE 1;

ESPETAR

TRAGEDIA

TRAGINAR

traginero *v.* TRAGINAR

TRAGO

tragon *v.* TRAGAR

TRAILLA

TRAJANO

TRAJE *s.* TRAGO

TRAMA

TRAMO

TRAMOJO

TRAMONTANA

TRAMPA

TRAMPANTOJO

trampear *v.* TRAMPAtrampista *v.* TRAMPA

TRANCA
 TRANÇADO
 TRANCAHILO
 TRANCE (REMATE)
 TRANCO
 TRANCHETE
 TRANQUILIDAD
 tranquila *v.* TRANCA
 transfiguración *v.* FIGVRA
 transfigurarse *v.* FIGVRA
 TRANZE *s.* TRANCE
 TRAPAÇA
 TRAPACETE
 trapacista *v.* TRAPAÇA
 TRAPAJO (ESTROPAJO)
 TRAPALA
 trapazo *v.* TRAPAJO
 trapecista *v.* TRAPAÇA
 trapería *v.* TRAPO
 trapero *v.* TRAPO
 TRAPICHE
 TRAPO
 traque *v.* TRAS
 TRAS
 TRASCORDARSE
 TRASDOBLAR
 TRASEGAR
 TRASERA
 trasero *v.* TRASERA
 TRASGO (DVENDE)
 trasiego *v.* TRASEGAR
 TRASIJADO
 TRASLADAR 1, 2
 traslado *v.* TRASLADAR;
 ARCHETYPHO
 TRASLVZIRSE
 trasmallo *v.* MALLA
 trasmuzarse *v.* ÇVMO
 TRASNOCHAR (NOCHE)
 TRASPALAR (PALA 1)
 TRASPARENTE
 TRASPASSAR

traspasso *v.* TRASPASSAR
 TRASPIE (PIE 2)
 TRASPLANTAR (PLANTA)
 TRASPONER
 TRASPORTAR
 traspuesta *v.* TRASPONER
 TRASTEAR
 trastejador *v.* TRASTEJAR
 TRASTEJAR
 TRASTES
 TRASTORNAR
 TRASTORNARSE
 TRASTOS
 TRASTROCAR
 TRASTROCARSE
 trata *v.* TRATADO
 TRATADO
 tratamiento *v.* TRATADO
 TRATAR 1, 2
 TRATO 1, 2 (TRATAR 2)
 TRAVAÇON
 TRAVAR
 TRAVAS
 TRAVES
 travesar *v.* TRAVIESO
 travesero *v.* CABEÇA
 travesura *v.* TRAVIESO
 TRAVIESO
 TRAYCION *s.* TRAJANO
 traydor *v.* TRAYCION
 traza *v.* TRAZAR
 TRAZAR *s.* TRABVCO
 TREBOL
 TRECE
 TRECHEL
 TREFE
 trefedad *v.* TREFE
 TREGVAS
 TREINTA
 treintanario *v.* TREINTA
 TREINTENA
 TREMEDAL

TREMENTINA
 TREMESINA
 tremielgo *v.* TORPEDO
 tremulo *v.* TEMBLAR
 TRENA
 TRENÇA
 treñado *v.* TRANÇADO
 TRENCAS
 TRENOS
 Trenque *v.* GVADALABIAIAR
 trepa *v.* ESTROPEÇAR
 TREPAP
 TREPICHE (TRAPICHE)
 TRES
 tres efes *v.* BESVGVETE
 TRESQVILAR 1, 2
 TREVEDES
 TREVEJAR
 TREVEJOS *s.* TRAVIESO
 TREZE
 TRIACA (CHARLATAN)
 TRIANGVLO
 TRIBVLACION (ABROIO)
 TRIBVNA
 TRIBVNO
 tributario *v.* TRIBVTO
 TRIBVTO
 TRICLINIO
 Trico *v.* MOTRICO
 tricocon *v.* AZEROLA
 TRIGLIFO
 TRIGO
 trigueño *v.* TRIGO
 TRIGVERA
 TRILLA
 TRILLAR
 trillo *v.* TRILLAR
 TRINCAPIÑONES (CASCAPÍÑONES)
 trincar *v.* TRINCAPÍÑONES
 TRINCHANTE
 TRINCHEA
 trincheo *v.* TRINCHANTE

TRINCHETE
 TRINQVETE (PELOTA)
 tripado *v.* TRIPAS
 TRIPAS
 TRIPERA
 TRIPERIA
 tripicallo *v.* DOBLON
 trique *v.* TRAS
 triquitraque *v.* TRAS
 tris *v.* TRISCA; TRAS
 TRISCA
 TRISTE
 tristeza *v.* TRISTE
 TRIVNFO
 troba *v.* TROBAR
 trobador *v.* TROBAR
 TROBAR
 TROCAR
 troçar *v.* TROZO
 TROCATTIE
 TROCHA
 trochar *v.* TROCHEMOCHE
 TROCHEMOCHE
 TROFEO
 TROGLODITAS
 TROIA
 TROMPA
 trompero *v.* AMOR
 TROMPETE (CARCAX)
 trompicar *v.* ESTROPEÇAR
 trompico *v.* TROMPA; ESTORNIJA
 trompo *v.* TROMPA
 TRONAR
 TRONCO 1, 2
 TRONCHO
 TRONERA
 tronido *v.* TRONAR
 TRONO
 TROPEL
 TROPEZAR
 TROPICOS
 tropieço *v.* TROPEZAR

TROPOLOGIA
 TROQVEO
 trotar *v.* TROTE
 TROTE
 troton *v.* TROTE
 TROX
 TROZO *s.* TROCHEMOCHE
 TRVCO
 TRVCHA
 truecaburras *v.* TROCAR
 TRVECO
 TRVENO
 truequicambio *v.* TRAPAÇA
 trugillano *v.* TRECHEL
 TRVHAN (CHVPAR)
 truhaneria *v.* TRVHAN
 trujaman *v.* TEVIAMAN
 TRVXILLO
 TV
 tubo *v.* ALCADVZ
 tubulo *v.* ALCADVZ
 TVDEL
 TVDELA
 TVDESCO 1, 2
 tuerca *v.* PVERCA
 TVERTO
 TVERTOS
 TVETANO
 TVFO (ATVFARSE)
 TVI
 TVLLIDVRA
 TVLLIR
 TVMBA
 TVMBADO
 TVMBAR
 TVMOR
 TVMVLO
 TVMVLTO
 TVNA
 TVNDA
 tundidor *v.* TVNDIR
 TVNDIR

TVNEZ
 TVNICA 1, 2, 3 (DALMATICA)
 tunicela *v.* TVNICA 3; DALMATICA
 TVPIR
 TVRAR
 TVRBA
 TVRBANTE
 TVRBAR
 TVRBIO
 turbion *v.* TVRBIO
 TVRBI1
 TVRCO
 TVRDETANOS
 TVRMAS (CRIADILLAS; TVFO)
 TVRNIO
 turno *v.* TORNAR
 TVRON
 TVRQVESA 1, 2
 turquesado *v.* TVRQVESA 1
 TVRRAR
 TVRRON
 tusilago *v.* VÑA 4
 TVSON
 tutela *v.* TVTORIA
 TVTOR
 TVTORIA

V vocal

V
 VBA *s.* VSMAR
 VBEDA
 uberrimo *v.* VBRE
 VBRE
 VCLES
 VEBRA
 VFANIA
 VFANO 1
 VFANO 2, *s.* VEZ
 ugier *v.* VSIER
 VLISES
 VLTIMO
 umbral *v.* LVMBRAL

unanimes *v.* VNO; ANIMAL
 VNCIÓN *s.* VNGIR
 undoso *v.* ONDEAR
 VNGIR
 VNGVENTO
 unguento populon, *v.* ALAMO
 VNICORNIO (BADA)
 VNIFORME
 VNIGENITO
 VNION
 VNIVERSAL (VNIVERSO)
 VNIVERSIDAD
 VNIVERSO
 VNO
 VNTAR
 VNTO (ENXVNDIA)
 VÑA 1, 2, 3, 4
 VÑA
 VÑERO (PANARIZO)
 VÑIR
 VRACAN
 uracar *v.* VRACAN
 VRACO (VRACAN)
 VRAÑO (HVRAÑO)
 VRBANIDAD
 VRBANO
 VRCA
 urdegambre *v.* ELEBORO
 VRDIEMBRE
 urdir *v.* VRDIEMBRE
 VRGEL *s.* VOTO
 VRINA
 VRRACA (PEGA 1)
 VRSVLA
 VSAGRE
 usança *v.* VSO
 VSAR
 VSENDÁ
 VSIER
 VSMAR
 VSO
 VSVAL

VSVFRVTO
 VSVFRVTVARIO
 VSVRA

 V consonante
 VACA
 VACACIONES (ESCVELA)
 vacada *v.* HATO
 VACANTE
 vaciadero *v.* VACIAR
 VACIAR
 vaciedad *v.* VACIAR
 VACIO *s.* VANA COSA (VACIAR)
 VACVO
 vadear *v.* VADO
 VADO
 VAENA
 vagamundo *v.* VAGAR
 VAGAR
 VAGEL *s.* VAGILLA
 VAGILLA *s.* VASIJA
 VAGVIDO
 VAL
 VALADI
 VALAGO (CAÑA)
 VALENCIA
 VALERA
 VALERIANA
 VALSAIN
 VALVARTE
 VALVASORES
 VALVASTRO
 VALLA
 VALLADO
 VALLADOLID
 VALLE
 VALLENA
 VALLESTA
 vallesteros *v.* VALLESTA
 VANA COSA
 VANAGLORIA
 vanaglorioso *v.* VANAGLORIA

vanasto *v.* CANASTA

VANCA

VANCO (TRASTES)

VANDA 1, 2

VANDALOS

VANDERA (VANDA 1)

VANDERETA (FLAMVLA)

VANDERIZO

vandero *v.* VANDERIZO

vando *v.* VANDA 2

VANDOLERO

VANEGAS

VANGUARDIA (AVANGVARDIA;
GVARDIAN)

VANIDAD

VANQVERO 1, 2

VANQVETE

VAÑO

VAPOR

VAPORAR

vaqueta *v.* CVERO

vaquilla *v.* VACA

VARA 1, 2, 3 (HAZES)

VARA 4, *s.* VAREAR

VARAL

VARANDA

VARAPALO

VARAR

varauste *v.* VARANDA

varca *v.* BARCA

VARCO

VARDA

VAREAR 1, 2

VARETEADO

VARGAS

VARILLAS *s.* VARETEADO

varita *v.* VARA 2

VARON (BARON)

VASAR *s.* VASO

VASCAS

vascongada *v.* VASCVÑA

Vasconia *v.* GASCVÑA

vascuence *v.* GASCVÑA

VASCVÑA

vasera *v.* VASAR

VASIJA *s.* VASAR

VASO 1, 2

vaso de yedra *v.* BERÇA

VASSALLAGE

VASSALLO

VASTAGO

VASVRA

vaxilla *v.* VAGILLA

VAYA *s.* VAGVIDO

VAYETA *s.* VAYA

VAYNA *s.* VAYETA

VAYNAS

VAYO *s.* VAYNAS (BAYO)

VAYONA

VAZQVEZ

vecino *v.* BARRIO

VEDAR

VEDEGAMBRE

VEDIJA 1, 2

vedijudo *v.* VEDIJA 1

vedriado *v.* VIDRIO

VEDRIERA

VEDVÑO

VEEDOR

VEGA

VEGADA (VEZ)

vegardo *v.* VIGARDO

VEINTE

veintena *v.* VEINTE

VEINTIQVATRO (REGIR)

VEJEZ (VIEJO 1)

VELA 1, 2, 3, 4, 5 (CANDELA;

VIGILIA)

velado *v.* VELO 3

velador *v.* VELA 2; CENTINELA

velambres *v.* VELO 3

velar *v.* VELA 2

VELARTE

VELEÑO (EMBELESADO)

VELESA (EMBELESADO)
 VELEZ
 VELILLA
 VELO 1, 2, 3, 4
 VELLACADA
 VELLACO (BELIAL)
 VELLAQVERIA
 VELLO
 VELLOCINO
 vellon *v.* VELLOCINO; TVSON
 VELLORITA
 vellosa *v.* EMBELESADO
 vellosa *v.* VELLO
 VENA (VENAS 1; AVENADO)
 VENABLO (IAVALI)
 VENADO
 VENAS 1, 2 *s.* VENA
 venator *v.* VENADO
 vencedor *v.* VENCER
 VENCEJO 1, 2 (ARRAXAQVE 1;
 AVION)
 VENCER
 VENDA
 VENDAR
 VENDAVAL
 VENDER
 VENDIMIA
 VENDIMIADOR
 venerario *v.* VENENO 1; IERVA
 venenata *v.* BVFON
 VENENO 1, 2 (IERVA)
 VENERA
 venerable *v.* VENERAR
 VENERAR
 VENERO
 VENGADOR
 VENGANÇA
 VENGAR (FIDALGO 3)
 VENGATIVO
 VENIDA
 VENIDERO
 VENINO

VENIR
 VENTA 1, *s.* VENDER
 VENTA 2, *s.* VENINO
 VENTAJA 1, 2
 VENTALLE
 VENTANA
 VENTANAJE
 VENTANERA
 ventero *v.* VENTA 2
 ventiquatro *v.* REGIR
 VENTISCA *s.* VIENTO
 ventisquero *v.* VENTISCA
 ventor *v.* VIENTO
 VENTOSA
 VENTREGADA *s.* VIENTRE
 VENTVRA (VENTVROSO)
 VENTVROSO
 VER
 VERA 1, 2
 VERAMVNDIO
 veras *v.* VERDAD
 veratro *v.* CODORNIZ
 VERDAD
 VERDE
 VERDEGAMBRE *s.* VENDAR
 (CODORNIZ)
 verdet *v.* CARDENCHA
 verdinegro *v.* NEGRA
 VERDOLAGA (SIEMPREVIVA)
 VERDOR
 verdugado *v.* VERDVGO 1
 VERDVGO 1, 2, 3
 VERDVRA
 VERDVREIRA
 VEREDA *s.* VERDVGO 3
 veredario *v.* VEREDA
 VEREDAS *s.* VEREDA
 verengena *v.* BERENGENA
 VERGA 1, 2
 VERGAJO
 vergante *v.* VERGANTIN
 VERGANTIN

VERGARA
 VERGEL
 vergonçoso *v.* VERGVENÇA;
 VERGVENÇAS
 VERGVEAR *s.* VERGA 1
 VERGVENÇA (CRIADILLAS 2)
 VERGVENÇAS
 VERGVETA *s.* VERGA 2
 VERIQVETOS
 VERJA
 vermiz *v.* GOMA
 VERONICA
 VERSO
 VERVENA *s.* VERAMVND0
 verxa *v.* VERJA
 VESTALES
 vestido *v.* VESTIDVRA
 VESTIDVRA
 VESTIR
 VETONICA
 VEZ
 VEZINDAD *s.* VEZINO (BARRIO)
 VEZINO *s.* VAZQVEZ
 VEZO *s.* VEZINDAD
 VIA
 viaças *v.* BIAZAS
 VIAJE
 VIANA
 VIANDA
 viandante *v.* VIAJE
 VIARAÇA
 VIBAR 1, 2
 vicario *v.* VEZ; VISORREY
 vicecanciller *v.* CANCELERIA
 VICENTE
 VICIO
 vicornio *v.* VIGORNIA
 VID
 VIDA
 VIDRIO
 vidrioso *v.* VIDRIO
 vidueño *v.* VID

VIEJA *s.* VIEJO 2
 VIEJO 1, 2
 VIENDRO (BIELDO)
 VIENTO
 VIENTRE
 VIERNES
 VIGA
 VIGARDO
 vigil *v.* RONDA
 VIGILIA
 VIGOR
 VIGORNIA
 VIGVELA (VIOLONES)
 VİL
 VILEZA
 VILORDO
 VILORTAS (ESTORNIJA)
 vilorto *v.* VILORTAS
 VILLA
 VILLA DE DON ALVARO
 VILLA GONÇALO
 VILLALON
 villancico *v.* VILLANESCAS
 VILLANESCAS
 VILLANIA
 villano *v.* VILLA
 VILLETE
 VILLORIN
 VIMBRE
 VINAGRE
 vinagreira *v.* VINAGRE
 VINDEL *s.* BIMESTRE
 VINO (NIEVE)
 vino aguado *v.* BERÇA
 vino de cañada *v.* CANILLA
 VIÑA
 viñedo *v.* VIÑA
 VIOLADO *s.* VIOLETA
 VIOLANTE
 VIOLAR
 VIOLENCIA
 VIOLENTO

VIOLETA
 violin *v.* VIOLONES
 VIOLON
 VIOLONES *s.* VIGVELA
 VIQVE
 Virdubescia *v.* BRIVIESCA
 VIRGEN *s.* VIROTE 2
 virginidad *v.* VIRGEN
 virgula *v.* VARA 2
 VIRIL 1, *s.* VIDRIO
 VIRIL 2, *s.* VIRGEN
 VIRIQVETOS
 VIROTE 1, 2
 VIRTVD
 VIRTVOSO
 VIRVEGA
 VIRVELAS
 Viruesta *v.* BRIVIESCA
 VISAGE
 VISAGRA 1, 2
 visarma *v.* ARMAR
 VISEO
 VISERA
 VISIBLE
 visita *v.* VISITAR 2
 visitador *v.* VISITAR 2
 VISITAR 1, 2
 visnaga *v.* VIZNAGA
 VISOGODO (GODO)
 VISOJO (BISOJO)
 visoño *v.* BISOÑO
 VISORREY
 VISQVIR
 VISTA *s.* VER
 VITORIA *s.* VENCER
 VITORIA
 VITRIOLO
 VITVALLA
 VITVPERAR
 viudez *v.* EMBIVDAR
 VIVORA *s.* VIARAÇA
 VIZCAYA

vizcayno *v.* CANTABRIA
 VIZCOCHO
 VIZCONDE
 VIZNAGA
 VOCABLO
 VOCABVLARIO
 VOCAL
 VOLVMEN
 VOLVNTAD
 VOLVNTARIO
 voluntarioso *v.* VOLVNTARIO
 vomitar *v.* ARCA 2
 VOMITO
 vomitorio *v.* ÇVMA
 VORAZ
 VOS (DIOS)
 VOSOTROS *v.* VOS
 VOTO
 vozear *v.* BOZ
 vuestra merced *v.* DIOS
 vuestro *v.* VOS
 VVLGO
 VVLPEJA (ÇVRRRA; ÇVRRADOR;
 RAPOSA)
 VUSCO *v.* VOS

X

X
 XABEBA
 XABECA
 XABON
 xabonar *v.* XABONERIA
 xabonera *v.* XABON
 XABONERIA
 xabonero *v.* XABONERIA
 XACARANDINA
 XACO
 XAEZ
 XAHARRAR
 XALEA
 XALMA
 XALON

XALOQVE (EVRO)
 XAMORRO *v.* ÇAMORRO
 XANDVLA
 XAPOIPAS
 XAQVE 1, *s.* IAQVE
 XAQVE 2 (XACARANDINA)
 XAQVECA
 XAQVIMA
 XARA (IARA)
 xaral *v.* IARA
 XARAVE (AXARAVE)
 XARAYZ
 XARCIA (SARCIA)
 XARDIN
 XARIFA COSA
 xarife *v.* XARIFA COSA
 xaropar *v.* XARAVE
 xarope *v.* XARAVE
 xaropear *v.* AXARAVE
 XARRAGVI
 XARRETE
 XATIVA
 XAVALI
 XAVECA
 xavega *v.* XAVECA
 xayan *v.* GIGANTE
 XEME
 XENABE
 XENIL
 XEQVE
 XEREZ
 XEREZ DE LA FRONTERA
 XERGA
 xergon *v.* XERGA
 XERINGA
 XERQVERIA
 XERTE
 XERVILLA
 XETA
 XETAFAE
 XIBIA
 XIMENA

XIMIA
 XIRAPLIEGA
 xiton *v.* GVITON
 XIXOTE
 XO
 XORGINA
 X. R. S. *v.* CHRISTIANO
 XVCAR (IVCAR)
 XVGO

Y

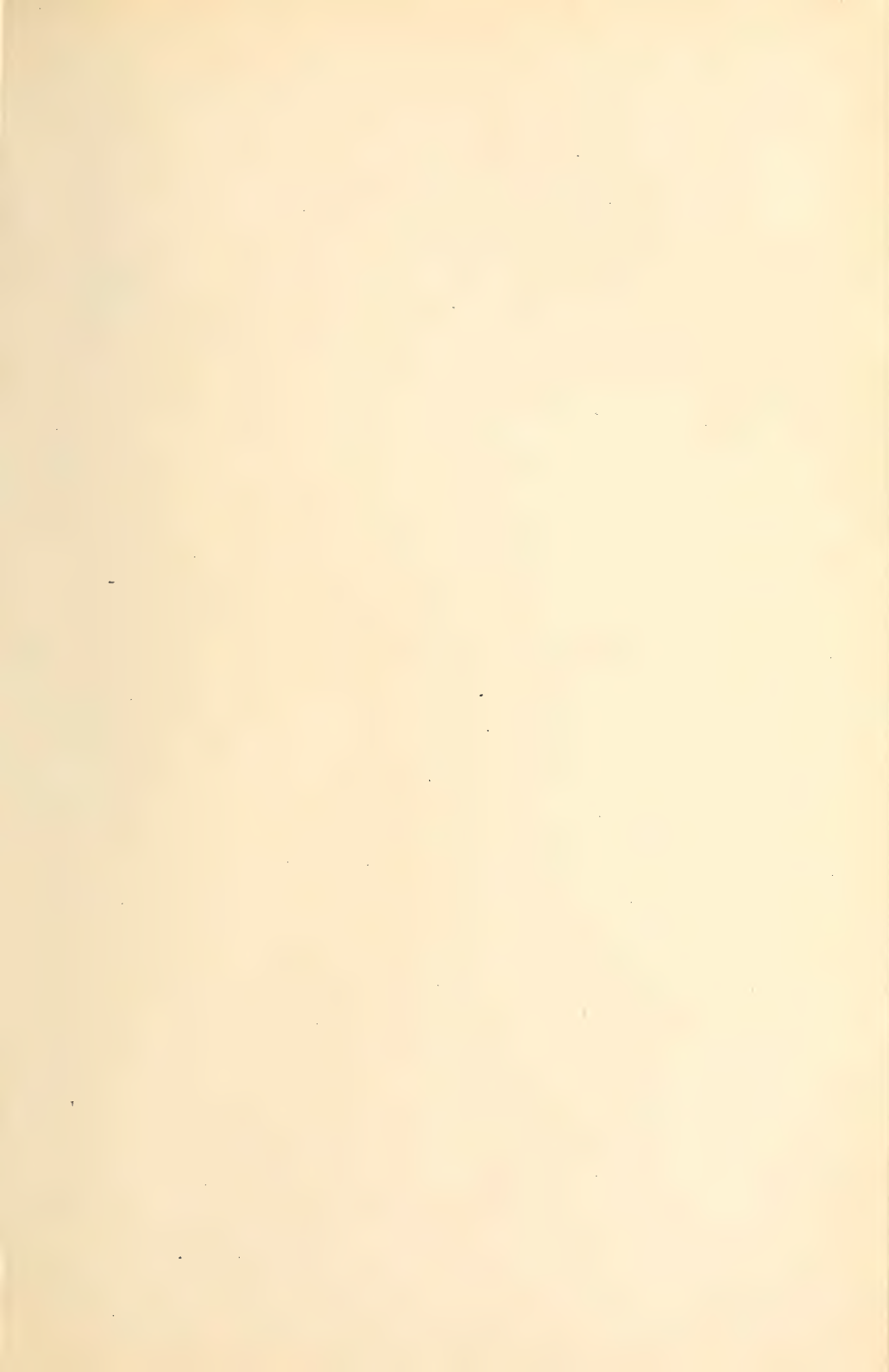
yedra *v.* BERÇA
 yeguada *v.* HATO
 yerba de San Antonio *v.* VELESA
 yerba de San Pedro *v.* VELLO-
 RITA
 YERMO *s.* IEPES
 yerva de ballesteros *v.* CODOR-
 NIZ; ELEBORO
 yerva de los tiñosos *v.* SOM-
 BRERERA
 yerva de San Juan *v.* ARTEMISA
 yerva estoque *v.* ESPADAÑA
 yesal *v.* IESO
 yeseria *v.* IESO
 yesero *v.* IESO
 yeso *v.* IESO
 yugada *v.* GVEBRA
 yuma *v.* GVEBRA
 yuncir *v.* VÑIR
 yuso *v.* SVS

Z

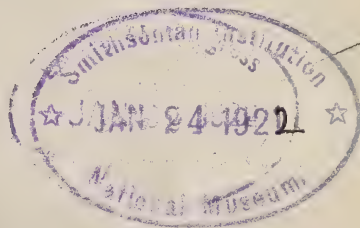
ZABORDAR
 ZABVLON
 ZABVLLIR (BVLLIR)
 ZACATIN
 ZAFERIA
 ZAFIO
 ZAFIR
 ZAGA

ZAGAL
 ZAGVAN
 ZAHAREÑO
 ZAHARRON
 ZAHEN
 ZAHERIR
 ZALA
 ZALAGARDA
 ZAMBOA
 ZAMBRA
 ZAMORA (ZAMBRA)
 ZAMPOÑA
 zaneſa *v.* FILATERIA
 ZANGANO (GALAVARDO)
 zape *v.* EXE 2; HARRE
 ZAQVE
 ZAQVIÇAMI
 ZARA
 ZARAGATONA
 ZARAGOÇA
 ZARCA
 ZARÇAGAN
 ZARCILLOS
 ZARCO
 ZARRAPASTROSO
 ZATARA
 ZATICO
 ZAVILA
 ZAYDA *s.* ZAHERIR
 ZAYNO *s.* ZAYDA
 ZEBRA
 ZEBRATANA
 ZEFIRO
 zelador *v.* CELOSO
 zelan *v.* CELOSO
 ZELOS (CELOSO)
 ZENEFA *s.* ZAMPOÑA
 zenogil *v.* AHINOJARSE
 zeori *v.* ÇAHORI
 ZERO

zerote *v.* ATANQVIA
 ZEYTE *s.* ZEFIRO
 ZEZIMBRA
 ZIMBORIO
 ZIZAÑA
 zizañero *v.* ZIZAÑA
 ZOCODOVER
 zocolante *v.* GALOCHAS
 ZODIACO
 ZOMAS
 ZONA
 ZORÇAL
 Zorita *v.* ÇORITA
 ZOROASTES
 Zoroastres *v.* ZOROASTES
 ZORRA (ÇVRRRA; RAPOSA)
 ZOTE
 ZVBIA
 zuçon *v.* ÇVZIO
 ZVMAQVE
 ZVMBAR
 zumbido *v.* ZVMBAR
 ZVMO
 Zuñigas *v.* ESTVNIGA
 ZVPIA
 ZVRA
 zurana *v.* ZVRA
 zuraño *v.* HVRAÑO
 ZVRCIR (SVRCIR)
 zureo *v.* IZQVIERDO
 ZVRDO
 Zurita *v.* ÇORITA
 zurra *v.* ZVRRAPAS
 ZVRRAPAS
 ZVRRAR
 ZVRRRIAGA
 zurron *v.* ÇVRRRA
 ZVTANO
 ZVYÇA
 zuyço *v.* ZVYÇA



INDIANA UNIVERSITY STUDIES



STUDY No. 49

JUVENILE DELINQUENCY AND ADULT CRIME. Certain associations of juvenile delinquency and adult crime in Gary, Ind., with special reference to the immigrant population. By EDNA HATFIELD EDMONDSON, Ph.D.

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.



STUDY No. 49

JUVENILE DELINQUENCY AND ADULT CRIME. Certain associations of juvenile delinquency and adult crime in Gary, Ind., with special reference to the immigrant population.
By EDNA HATFIELD EDMONDSON, Ph.D.

Submitted in partial fulfilment of the requirements for the Doctor's degree in Indiana University.

Table of Contents

	PAGE
Chapter I. Introduction.....	5
1. Subject-Matter.....	5
2. Gary the City.....	7
3. The Population of Gary.....	18
Chapter II. Juvenile Delinquency and Adult Crime.....	36
1. Statement of the Question.....	36
2. Definitions.....	39
3. Description of Groups Selected for Study.....	41
4. Description of Method Used.....	45
Chapter III. Certain Associations of Juvenile Delinquency.....	50
A. General Considerations—	
1. Proportions by Race or Nationality.....	50
2. Kinds of Offenses.....	50
3. Disposition of Cases.....	52
4. Repetition of Offense.....	53
B. Individual Considerations—	
5. Age.....	53
6. Sex.....	55
7. Abnormality.....	56
C. Cosmic Considerations—	
8. Seasonal Delinquency.....	56
D. Social Considerations—	
9. Maladjustment.....	57
10. Association in Delinquency.....	57
11. Geographical Distribution.....	58
12. Church Affiliation.....	59
13. Home Conditions.....	60
14. Home Conditions—Housing.....	61
15. Home Conditions—Family Life.....	62
16. Industrial Status.....	66
Chapter IV. Certain Associations of Adult Crime.....	68
Section I—	
A. General Considerations—	
1. Proportions by Race or Nationality.....	68
2. Kinds of Offenses.....	68
3. Disposition of Cases.....	74
B. Individual Considerations—	
4. Age.....	76
5. Sex.....	77
6. Civil Condition.....	78
7. Illiteracy.....	79
8. Height and Weight.....	81

C. Cosmic Considerations—	
9. Seasonal Crime.....	83
D. Social Considerations—	
10. Birthplace.....	83
11. Association in Crime.....	85
12. Geographical Distribution.....	87
13. Industrial Status.....	88
Section II.....	90
Section III.....	91
Section IV.....	92
Chapter V. Conclusion.....	94
Chapter VI. Appendix.....	100
1. Tables.....	100
2. Bibliography.....	107

Preface

THIS thesis has been prepared under the direction of Professor Ulysses G. Weatherly to meet the requirements for the degree Doctor of Philosophy in the Department of Economics and Sociology in Indiana University.

Because of the short period of time covered, and because of the comparatively small number of cases included, the materials in this study have been intensively rather than extensively treated. For this reason also much of the information in this study must stand simply as materials and not as a basis of any sweeping generalities.

Since this study was prepared in 1916 many changes have taken place in Gary; in its industries, in its physical appearance, in its population, in living conditions, and in general social life. The most important of these changes perhaps are those brought about by the war and by national prohibition. The single fact of the passing of the saloon has very materially affected the social conditions in the city. No attempt has been made to bring the materials in this study up to date because of the danger of lessening the value of the study as an historical sketch of Gary in the early years of its existence. The study is offered as a picture of conditions which were true at the time of its preparation in 1916.

As originally prepared, the study contained 121 tables in Chapters III and IV. Because of the expense of publication, it has been necessary to omit most of these tables from the printed study, including only a few of the most important of them in the Appendix. These original tables with fuller explanation have been arranged and deposited in the Indiana University Library, Bloomington, Ind., where they are available to those students wishing more detailed material concerning the facts given here, under the title, "Juvenile Delinquency and Adult Crime—Certain Associations of Juvenile Delinquency and Adult Crime in Gary, Ind., with Special Reference to the Immigrant Population—Tables for Chapters III and IV".

The author is especially indebted to Willis C. McMahan, judge of the Lake County Juvenile Court, Crown Point, Ind.; Mary A. Kirby, special officer of the Lake County Board of Children's Guardians, Gary, Ind.; Rhoda M. Welding, secretary of the Associated Charities, Gary, Ind.; J. C. Tracy, postmaster, Gary, Ind.; Pontius Heintz, chief of police, Gary, Ind.; Thomas W. Brolley, chief of Bureau of Statistics of Indiana, Indianapolis, Ind.; Wilbur A. Cogshall, professor of astronomy, Indiana University, Bloomington, Ind.

I. Introduction

1. SUBJECT-MATTER

THE movement into the United States of more than thirty-two millions of immigrants from almost every part of the world from 1820 to the present time marks one of the most remarkable migrations in history. These immigrants are divided into two chief groups, depending on the time of their coming and the chief countries from which they come: the Old Immigration, consisting chiefly of immigrants from the countries of northern and western Europe, coming to this country from 1820 to 1882; and the New Immigration, consisting chiefly of immigrants from southern and eastern Europe, coming to this country since 1882.

Depending on the point of view, the immigrant is enthusiastically credited with the great industrial expansion of the country; the improvement of labor conditions of the American working-man, by strengthening the labor unions, and by furnishing a substratum of common labor upon which has been built a superstructure of supervisors, foremen, and skilled workmen; the lessening of vice, crime, and poverty; and the addition of physical and moral personal qualities of a nature to improve our national type. With equal fervor the immigrant is condemned for lowering the standard of living of the working classes in this country; for lowering wages; for increasing vice, crime, and poverty; and for lowering our national physical and moral standards. The same statistics are used with equal facility to draw directly opposing conclusions. The real truth lies somewhere between these two points of view and must be sought in careful, impartial studies of the immigrant as he lives in this country.

He has been studied as he lives in his home in his native country, and the causes for his coming have been carefully searched out. He has been traced from his home to his place of embarkation, has been accompanied thru the indescribable steerage, has been landed at Ellis Island, has been passed thru the ordeal of entrance—the hysterical fear of being turned back—and has been followed to his new home and established. These processes are known, and are now a matter of history, the study of which has led to definite improvement.

There remains the necessity for intensive, sympathetic, and understanding study of the immigrant as he lives in this country, not as detached from but in the light of that old home, those causes of coming, that steerage, and that entrance gate. This phase of the subject presents the usual difficulties of any contemporaneous study. The processes are not known and fixed. The ultimate reactions to conditions of American life lie far in the future and all that can be hoped for at present is the indication of certain tendencies and the presentation of certain conditions; that is, a better understanding of the nature of the problem.

Fairchild suggests two kinds of studies of the immigrant as he lives in this country.¹ One he calls a longitudinal section of the problem—the study of single racial groups of immigrants, such as the study of the Slavs by Emily G. Balch; the other a transverse section of the problem—the study of particular phases of the life of immigrants of all races or nationalities living in the same group; such as housing conditions among immigrants, the food of immigrants, assimilation, etc. In this study the latter plan is followed: that is, juvenile delinquency and adult crime are studied in their relation to immigrants of all races or nationalities living in a single community.

There are two characteristic dwelling-places of the immigrant in this country: first, compact colonies in large cities; and second, residence sections of mining camps and smaller industrial cities called “patches”.² The first offers perhaps the advantage in the study of racial and national problems as isolated problems in the light of conditions in the old home of the immigrant, because such communities grafted on to an American community take little part in public affairs, but are occupied largely with their own businesses of life, forming a community within a community. The second type of dwelling-place, the “patches” of mining camps and smaller industrial cities, furnishes a much more profitable field for studies of the immigrant in his relation to American institutions and conditions of American life, for here oftentimes the immigrant takes his part in the building up of the whole community, socially and politically as well as industrially. Such a community lends itself more readily to the purposes of this study.

The immigrant population of Gary, Ind., has been selected for this study for three chief reasons. First, this population

¹Fairchild, pp. 213–214.

²Fairchild, p. 234.

offers opportunity for a transverse study because it has present in it most of the various racial or national groups now in this country, and now coming to this country; second, in Gary the immigrant population was on the ground as early as the native born Americans of native born parents, so that whatever the community represents is due alike to immigrants and to native Americans; third, a personal acquaintance with the history of the city and with its people, resulting from two years' work in its limits as juvenile court officer, is of great advantage in knowing where materials may be found and in making access to them easier.

In order to make a satisfactory study of juvenile delinquency and adult crime in the *immigrant* population of Gary, these pathological manifestations must be studied in relation to *all* race or nationality groups in Gary, for the sake of comparisons. And in order to understand that part of the population included in juvenile delinquency and adult crime, it is necessary to make a brief introductory survey of the character of the city of Gary and of its general population.

2. GARY, THE CITY

To the outsider, interest in the city of Gary centers about one of three things: its industries, its school system, or its dramatic growth. Shot thru these interests and dominating them is the larger universal interest—that of the character of the population which has made these things possible and which in turn has been made possible by them.

It is very difficult in writing the story of any contemporary city for even a resident of the city to distinguish history from romantic tradition, to distinguish the present of any given moment from the past and future of that moment, and to refrain from entering upon speculations as to the future. Much more difficult is it to write the story of a city which from a population of nothing in 1906 has reached a population of 40,000 in 1916.

The materials for this brief survey of Gary, the city, are taken from personal knowledge of the city, from personal interviews with men and women who have helped to make the city and are helping in its growth, from official reports of the city of Gary, from official reports of the county of Lake in which the city is situated, from official reports of the state of Indiana, from

the census of the United States of 1910, and from magazine articles and books.³

Perhaps no city in America has a more interesting life story than Gary. In picturesqueness it rivals the gold and silver cities of the far West in early days. While those cities were built around the mining and milling of silver and gold, Gary has its foundation in the manufacture of a so-called baser metal, that of iron and steel, and of iron and steel products, an industry whose stock manipulation in the great financial centers of the country is certainly not inferior in the magnitude of its financial operations to that of gold and silver mining stock of early days, tho it may lack some of the spectacular features and be attended perhaps with somewhat greater dignity and somewhat calmer deliberation.

The city of Gary apparently sprang up in a night on the southern shore of Lake Michigan from a barren waste of sand dunes into a city complete attracting to it 40,000 people⁴ of some 47 racial or national groups who give to it its peculiar international character, lending a touch of Old World color: now as a bridal party dressed in bright colors dear to the immigrant heart gaily escort the white-veiled bride and proud-faced groom thru the streets; again as a solemn funeral procession slowly marches behind the hearse on the way to the photographer who will take a picture of the dead covered over with flowers and surrounded by living friends and relatives; or finally as many groups join together in native folk costume, each group with its band playing its own national airs, in one big political parade, shouting over and over again "Knotts, Knotts, Knotts", the name of the candidate for mayor, the only English word many of them know.

The city is full of many strange inconsistencies. Broadway, running thru the center of the city, is a beautiful paved street five miles long and 100 feet wide with cement sidewalks its entire length. On its northern extremity it is flanked by public buildings and business houses of which any city might be proud. And yet just two squares west of this same Broadway and only a few squares south of the city's beautiful residence district is a typical immigrant settlement of tar paper shacks promiscuously set down in the sand at various angles, forming a little village

³Sources: Survey 29:13, 781; 22:20; 27:1145; "Satellite Cities", Graham Romeyn Taylor, *Independent* 70:337; Putnams 5:643; Annual Report Indiana Bureau of Statistics, 1913, pp. 134, 529; McClures 41:61; American Review of Reviews 37:354.

⁴In 1916.

community: each shack with its number, 56, 57, etc. Each shack has its accompaniment of sheds, dog houses, chicken coops, and stack of hay or swamp grass gathered from the prairie. Cows, horses, dogs, geese, pigs, chickens, and beautiful children in droll looking clothes tumble over each other in the sand. In the evening the women come in along the paths from the prairies, wearing their shawls and kerchiefs over their heads and their short, full skirts, and bending under bundles of sticks tied on their backs. As they gather in groups laughing and chatting a few minutes before separating for their various shacks, the red of the setting sun behind them throws this picture of peasant life into a bold relief that quite blots out another picture only two squares away, a picture of the hustle and bustle of an American business day drawing to a close.

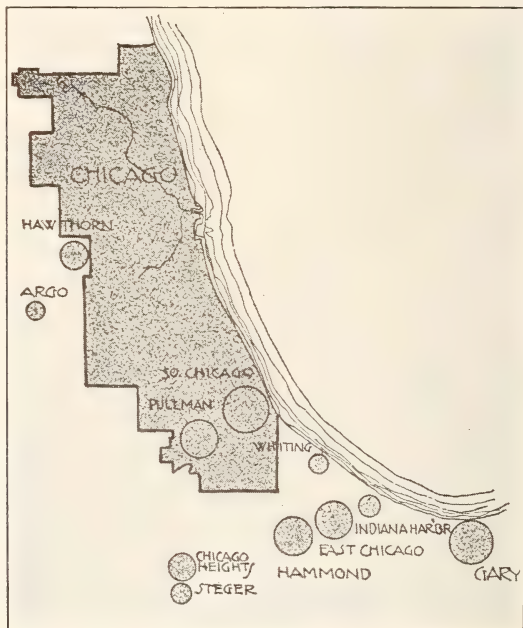
A street car loaded with workmen from one of the most perfectly appointed and equipped modern steel plants in the country turns off Broadway and clangs past, disturbing the line of march of a flock of geese which two little Italian girls, Santina and Carmella, are driving home to their father's shack—geese whose feathers are to go into great fluffy mattresses between which the children will sleep snug and warm against the winter winds filtering in thru the cracks and crevices of their poor little shack.

A visitor in Gary is immediately struck with the fact that there are few old people. In the streets, in the offices, in the shops, in the mills, in the homes, people are young. Youth pervades the atmosphere. Perhaps it is this youth, both of people and of city, which accounts for the air of hope, of enthusiasm, of confidence in the future, which everywhere obtains. Everybody is a self-appointed "booster". Occasionally a "knocker" is heard, but he is usually a very recent arrival, and only a few months' residence is necessary to convert him into an ardent enthusiast.

From the streets the visitor carries away with him the impression of color, of music, and of movement; from the offices and shops, of energy, of efficiency, and of stability.

The accompanying diagram shows Gary located at the head of Lake Michigan in Indiana 26 miles southeast of Chicago's downtown, one of a series of cities on the industrial edge of Chicago. In 1906 when the United States Steel Corporation felt the need of greater facilities for the manufacture of steel the geographical location of a site for additional steel plants became a vital question. The center of steel construction was moving

west from Pittsburgh because of the great development of the West; therefore the center of the manufacturing and the distributing of steel should be somewhere in the Middle West. Chicago had already established its claim as such, but real estate values and crowded conditions there were points to be considered. The tract of land at the head of Lake Michigan in Indiana offered advantages for the production and distribution of steel as good, and in some ways better, than Chicago. It was



THE CHICAGO SATELLITES⁵

midway between the ore beds of the North and the coal beds of the South; it was in the path of the great east and west railroads already built into Chicago; it was easily accessible to ore boats from the lakes; and in addition to these facts there was an almost unlimited area of cheap unimproved land offering plenty of room to grow. The nearness of Chicago offered the advantages of its labor market, the housing facilities of its southern suburbs, and easy access to the president of the subdivision whose offices were in Chicago. It is also said that the laws of the state of

⁵"Satellite Cities", Graham Romeyn Taylor, Survey, Oct. 5, 1912. By permission of the Survey Associates, Inc.

Indiana are especially favorable to great manufacturing corporations.

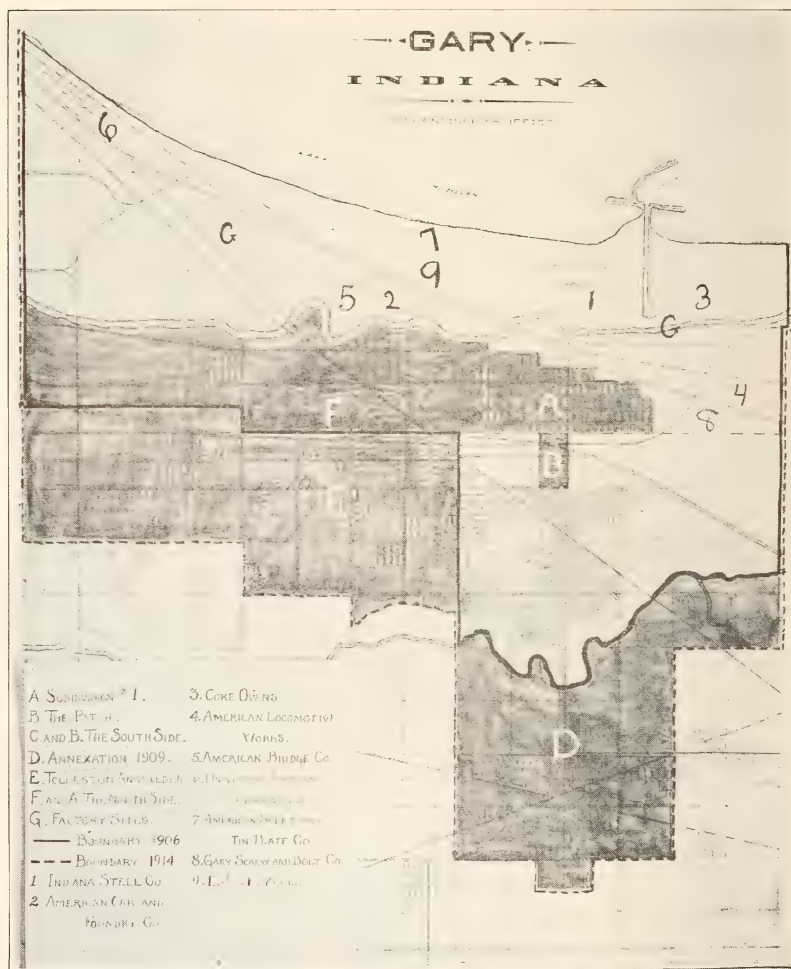
The United States Steel Corporation acquired a strip of land in this location 8 miles in length and averaging 2 miles in width fronting Lake Michigan. This site is in a region of great geological and botanical interest. Near the lake shore bare shifting ridges of drifting sand bury everything in their path, the surface as it changes with the winds showing the wave formation of the water in the bordering lake. Back a mile or so from the lake these ridges of sand 20 to 40 feet high are sparsely covered with scrub oak, and between them are ponds or marshes famed for water lilies and water fowl. Growing on the ridges and in the sags between them are many varieties of wild flowers from the gaudy flame color of the "prairie fire" to the delicate colors of the wild orchids. Thru this region the sluggish Grand Calumet river flows to South Chicago where it empties into the lake. The land was valueless for agricultural purposes—land which now⁶ at what is the intersection of Broadway and Fifth avenue is valued at \$1,000 a front foot. In 1906 there was much work preliminary to the establishment of an industrial city: a river must be moved, gullies must be filled in, a harbor or shelter must be built so ore boats could get nearer the shore than a half-mile, and much of the plant must be built on made land.

The United States Steel Corporation needed thousands of men to build and operate its mills: the families of these men needed houses, furniture, food, clothes, schools, churches, and other necessities. The Steel Company was deeply interested in getting a town built and populated rapidly. Necessity drove the United States Steel Corporation to build not only the plants but also the city of Gary. For these tasks it organized two subsidiary companies: the Indiana Steel Company to build the plant, and the Gary Land Company to build the town, both plant and town to be under the same municipal jurisdiction.

As the primary reason for the existence of Gary at all is its industries, a brief consideration must be given to them in order to understand the population. These industries consist of the Indiana Steel Company subsidiary to the United States Steel Corporation, and a group of other plants and companies either subsidiary or independent, many of them using the steel manufactured by the Indiana Steel Company. The map on page 12 shows that all but two of the plants are located in the narrow

⁶1916.

strip between the Grand Calumet river and the lake. Almost in the center of the strip is located the mill of the Indiana Steel Company, marked 1 on the map, and just on the east is the harbor and slip 250 feet wide and a half-mile in from the shore. This



plant begun in 1906 turned out the first steel rail on January 13, 1909. Its problem was that of tremendous buildings put up with rapidity and perfection. Plans for the whole plant must be complete before any part of it could be put up, so that it might grow systematically and in 25 or 50 years be as perfect a plant as if all had been built at one time.

From the map on page 12 will be seen the sites of other plants: 2, the American Car and Foundry Company, independent; 3, the Coke By-Products Company; 4, the American Locomotive Company, independent; the repair shops of the Chicago, Lake Shore, and Eastern Railway; 5, the American Bridge Company, subsidiary; 6, the Universal Portland Cement Company, subsidiary; 7, the American Sheet and Tin Plate Company; 8, the Gary Screw and Bolt Company; and 9, the switch yards and repair shops of the Elgin, Joliet, and Eastern, the Steel Company's railway. These plants furnish employment for a large part of the population of Gary, and give it its industrial character.

While the Indiana Steel Company was building the plant, the Gary Land Company platted two square miles just south of this strip as the original town of Gary, named for Judge E. H. Gary, the chairman of the executive committee of the United States Steel Corporation. The company decided to carry on the actual building operations of the town itself for three reasons: first, in order that the town might be built rapidly enough so that when the plant opened there would be houses for its workmen; second, few workmen would have enough ready money on hand to build their own homes; and third, if the building were left to others there would inevitably be land speculation and abnormally high prices. The shaded portion *A* on the map on page 12 shows "Subdivision No. 1", the original area plotted by the Gary Land Company.

It is said that Gary was a city complete from the start—that it shaped itself according to a completely formed idea. For a long time after 1906 there was no outward sign of a city. The ridges of sand were leveled and the town laid out providing for streets, sites for parks, public buildings, and schools. Then began the building of the city below the ground—the laying of sewers, water pipes, gas mains, electric light conduits in what were to be alleys, and the erection of a water intake. Thus at enormous preliminary expense was placed all the underground work of a capacity to serve a city of 300,000 people, so that in later years streets and alleys will not have to be torn up as the town grows, and so that the original sale price of each lot will have covered the price of all the improvements. When the underground work was done the streets were laid and the building above ground begun.

The street plan of Gary is the old-fashioned rectangle. The two principal streets originally laid out were Broadway, running

south from the gates of the mill, a street 100 feet wide with cement walks 18 feet wide, and Fifth avenue, running at right angles to it, a street 80 feet wide with correspondingly wide walks. Other streets are 60 feet wide and are laid out according to the original plan of these two streets. Alleys 30 feet wide run the long way of every block.

Subdivision No. 1 was platted with a business district and a residence district. In the business district the Land Company sold lots to outsiders with the provision that buildings of a certain class should be put up in a certain time, and with the provision that with two exceptions no intoxicating liquors should be sold on these lots.⁷

In the residence district the lots sold for the price of the land plus the cost of the improvements—that is, the paving, sidewalks, sewers, etc.; and if built on, plus the cost of the house with 5 per cent interest on the amount invested. In the beginning the Company built 506 dwellings, selling as fast as possible. Lots were also sold to individuals for residence building purposes with certain building restrictions laid down by the Company. The purchaser must put up a residence of a certain standard costing from \$2,000 to \$5,000, and the plans must be approved by an agent of the Company; the building must also be completed by a certain time after the purchase of the lot—usually 18 months; a uniform building line of 25, 29, or 30 feet, depending on the district; and no intoxicating liquors to be sold on the premises. In order to avoid speculation each person might buy only one lot at a time and build on it; but when his building was completed he might sell, buy another lot, build and sell again, etc. This scheme aided in the more rapid building of the town.

In a district in the northwest part of Subdivision No. 1 the Company put up a number of cheaper residences. This district known as "Kirkville" was occupied mostly by workmen of the Chicago, Lake Shore, and Eastern railway.

In the northeast corner of the subdivision, the Company built a number of very much cheaper houses described as double dry-goods boxes, of five rooms and a bath each. This district was popularly known as "Hunkeyville" and was designed for the low-paid immigrant laborer. The experience of the Company with this type of tenant was so discouraging because of the filth, overcrowding, keeping of boarders, misunderstandings, and mis-

⁷This was before national prohibition. See Preface.

use of the property, that these tenants were ordered to move out and the houses were put in condition for other tenants of higher order.

In the original plans for the city of Gary, sufficient land was not bought, and later when this mistake was recognized and the Company found that it must have more land for the town, it discovered that a strip (shaded portion *B* on map, page 12) of about 5 blocks fronting on Broadway had been bought up by private individuals who would not sell by the acre or at all at a price the Steel Company was willing to pay. The Company bought the land north, south, east, and west of this district and imposed certain restrictions upon it; but this strip which could not be bought remained independent, and became known as "The Patch" with the characteristics of other "patches" at mining camps, and fringing other industrial cities. There were no restrictions in "The Patch". The working-men and temporary transients who were building the town and the plants flocked to this part of the town. They wanted to be able to get beer as often as they liked, and in as large quantities as they wanted, and here there were no restrictions on its sale. Saloons, boarding-houses, and temporary residences sprang up on all sides. "The Patch" was platted amid great excitement and speculation. There were no building restrictions, so every man built for himself. It is not surprising that "The Patch" had structures not tolerated in the other parts of Gary, tho many of its buildings were quite up to the standard of those in Subdivision No. 1. "The Patch" was compelled to lay its own sewers, water mains, etc., and lots here were loaded with special assessments. Workers on low wages were inveigled into buying lots, the payments for which in instalments was a heavy burden on their families. Boxlike frame houses were put up as rapidly as possible but could not keep pace with the increasing need for housing accommodations. During the period of construction "The Patch" practically ruled Gary. The Steel Company isolated it in a way by failing to improve the land adjoining, but this had very little effect on its life and activities.

The story of these two parts of Gary in its early history has been gone into thus fully because of its significance in the present city. The map on page 12 shows Subdivision No. 1 as the shaded portion *A*. This district dominates the life of that part of Gary north of the Wabash railroad known as the "North Side", the shaded portions *F* and *A* on the map. Just south of this, from

the Wabash railroad tracks to Fifteenth street and from Broadway to Madison is the small district originally known as "The Patch", shown on the map as shaded portion *B*. This district has stamped its character in many ways on the life of the district, given on the map as the shaded portions *C* and *B*, known as Gary's "South Side". Thus there are in Gary today⁸ these two characteristic districts: the North Side characterized by regulation, order in planning and in building, good housing conditions, good streets, sanitary conditions, and only two places where intoxicating liquors are sold;⁸ and the South Side where are most of the saloons,⁸ crowded conditions, houses of prostitution, unsanitary conditions, and poor living conditions. In the North Side live, in general, the better-to-do: skilled workmen, professional men, business men—principally the higher social and economic classes of native born Americans and the Old Immigration. In the South Side, in general, live the unskilled common laborers and small tradesmen, principally of the New Immigration, and the Colored, but with the lower social and economic classes of Americans and the Old Immigration.

The map shows the original boundary of Gary in 1906 outlined in heavy solid line. There have been about 300 subdivisions platted since that time. The district just south of the Little Calumet river, shown on the map as shaded portion *D*, was annexed in 1909, and Tolleston, the large district to the west, shown on the map as shaded portion *E*, annexed in 1910. Such has been the expansion of Gary till at the present time it measures about 7 miles from east to west and about 5 from north to south, including about 31 square miles. The present boundary of Gary is shown on the map in heavy broken line.⁹

The political history of Gary is quite picturesque but cannot be entered into here at any great length. With an army of workmen and but a very small settled population, Gary was incorporated as a town on July 17, 1906. It became a city of the fifth class under the laws of the state of Indiana in October, 1909, a city of the fourth class in October, 1910, and a city of the second class January 1, 1915.

In the whole history of Gary, housing facilities have never been sufficient to satisfy the needs, because of the fact that it takes time to build houses. Even as late as 1911 it was estimated that not over half of the people working in Gary could find

⁸This was in 1916 before national prohibition went into effect. See Preface.

⁹1916.

homes there, and in April, 1916, it is predicted that the temporary shack must be resorted to in order to shelter workmen for additional building. The problem at first was the temporary housing of men to build the town and the plant. They were carried thru one winter without permanent shelter—among the sand dunes first appearing a city of tents. Then came the city of shacks. These shacks are structures of rough boards covered with tar paper or canvas, put up by land-owners as temporary shelters, or by squatters as homes. Many of these have been pulled down and their building is now prohibited in Gary, but some of them are still occupied by workmen and immigrant laborers and show very bad conditions of sanitation, crowding, etc.

After the tar paper shack came the city of brick, cement, and stone. The Gary Land Company put up 506 houses on the North Side, substantially built and attractive in appearance, to be leased to its workmen, or preferably sold at prices from \$2,000 to \$5,000. The American Sheet and Tin Plate Company put up 110 cement houses to be rented to its employees. The employees renting these houses are mostly English and American skilled workmen. The American Bridge Company has put up in its subdivision (marked *F* on the map) two miles west of Broadway 294 houses for its employees in executive positions. These three sets of company houses have been put up by the same land company, but show a diversity in construction differing from the frequently ugly uniformity of wholesale building. Other houses have been built by individuals. The buildings in Kirkville and Hunkeyville have already been described.

These houses are all located on the North Side and are occupied by families of skilled workmen, better-paid workmen, officials, professional men, tradesmen, etc.,—mostly American born, English, Irish, German, and others of the Old Immigration. The problem has been only to get a sufficient number of houses.

On the South Side of Gary, however, the problem is this same one with the addition of other more menacing ones. Here is where live the low-paid immigrant common laborer and his family, most of the colored people, and those of the lower social and economic classes of Americans and Old Immigration. The homes here are mostly flimsy, boxlike frame houses, barrack-like shacks of "apartments", and rough board tar paper shacks designed for single "dwellings". The conditions of the slum district are here seen—crowding, both of buildings on lots and of people in

the buildings, bad sanitary conditions, the practice of keeping many boarders, etc. Not all the housing conditions on the South Side are as dark as these—some are as good as those on the North Side, but this is the prevailing condition.

In Subdivision No. 1, as has been explained, provisions were made that intoxicating liquors might be sold in only two places. There was one large saloon on Broadway near the entrance to the Steel mills, and a bar in the Gary Hotel on Broadway and Sixth street. South of this district in the section not owned by the Land Company, that is, in "The Patch", there were no restrictions as to the number of saloons. In 1911 it was estimated that there was one saloon to every 88 people, and in 1913, one to about 151 people. In 1910 there were 246 saloons; in 1911 the Indiana law raised the Gary license fee to \$725 a year, and added the provision that no new saloons might be licensed till the proportion of saloons fell to one to every 500 population. The number of licenses issued in this year, 1911, fell to 194, and in 1912 and 1913 the number was the same. In 1913 the amount of money received in license fees amounted to \$87,691.60.

The growth of the institutions of Gary has kept pace with that of the town and reflects the character of the population as no other phase of the city life can. They will be referred to here only briefly, however, as they have been so adequately described elsewhere. The school system which was established at the very beginning of the city on its present basis has been a subject of study by outsiders for some years now. The public library, the parks, and playgrounds are a part of the recreational and educational program; the churches of many denominations, Catholic, Protestant, and Hebrew; the social settlements and Y.M.C.A., are a part of the religious and educational program. The Steel Company has its own hospital, and in addition to this there are two others: one denominational hospital and the city hospital. In the matter of public utilities the city manages the police, fire, and health departments; water, light, and gas are furnished by a subsidiary of the Steel Corporation, the Gary Heat, Light, and Water Company, whose franchise may be acquired by the city at a later date; and the franchise for the street railway is held by an independent company.

3. THE POPULATION OF GARY

There have been two stages in the growth of the population of Gary: the construction period and the operating period. The

first population, that of the construction gangs, was temporary and numbered some 6,000 workmen. With the exception of the foremen and skilled laborers necessary for construction work, these workmen were chiefly of the lowest grade of immigrant laborers who came without families, crowding into tents and shacks. They presented living conditions such as those of the ordinary railway construction gangs. As the construction period gave way somewhat to the period of operating, the character of the population changed. Some of the members of this population, the construction gangs, remained in Gary still as construction gangs, for the work of building still went on; some moved on to other works of this sort; some became workers in the mills and took up a permanent residence in Gary, instituting some sort of family life, some sending for families if they had any, some sharing in the family life of others, or taking to the boarding-house outright as a permanent home place. Other permanently employed steel workers moved in—skilled laborers, foremen, office men, officials, etc. Along with this population came the element identified with the town—storekeepers, launderers, newspaper men, lawyers, physicians, other professional and business men, etc. The population now became permanent in character and presented conditions of community life.

The population at the present time is primarily an industrial population, for Gary is an industrial city. This population is made up of skilled and unskilled laborers, foremen, clerks, officials, etc., of the steel mill, subsidiary plants, and other mills and plants. Aside from this population there is, as given above, the population identified with the development of the town. A study of the city directory is interesting as showing how this population is employed in 1914 aside from the great industries, and also as indicating in great degree the peculiar needs and wants of Gary. For example, the great number of real estate dealers indicates the newness of the town; the great number of architects, lumber dealers, contractors and builders, brick and cement dealers, electricians, etc., indicate the great amount of building operation going on; the number of banks, the amount of financial operations; the number of hotels and restaurants suggests the fact that the population does not live in normal family groups; the number of lawyers, that the population is given to much litigation; the number of saloons and breweries, that the population demands liquors;¹⁰ the listing of a maker

¹⁰1916. Before national prohibition.

of flags of all nations, that the patriotic population is not a homogeneous American born population; etc.

Without doubt the most interesting part of the population is that gathered in "The Patch" and other parts of Gary where the New Immigration chiefly lives.

One of the finest things these people bring to America is their love of the home; and the sacrifices they make in their eagerness to own a home in the New World are often mistaken for selfish greed or interpreted as a lack of appreciation of the privacy of home life. On the contrary, they really have the highest home ideals, but necessity often drives them to yield up such ideals for a time. Most of the homes are bought on credit and are loaded with heavy mortgages, to meet the payments on which the general practice of keeping boarders is followed. Under one system of keeping boarders, the wife in the family receives \$3 or \$4 a month from each man in return for doing his washing, his cooking, and furnishing him a place to sleep. Under this system each man keeps his own grocery book and buys his own food. To make payments on homes in some cases naïve methods are resorted to. There have been cases where the family put all its earnings into these monthly payments, depending upon public charity for food and coal.

These homes of the immigrant do not escape the modern tendency to institutionalize the home. While it is true that the Day Nursery cares for its children with a high degree of efficiency, it also puts a premium on the mother's work away from home; and while the hospital gives to the sick a chance utterly impossible in these homes, it also takes away in part that sense of responsibility for the weak. Such institutionalizing influences destroy those finer feelings of self-dependence and responsibility engendered in the inner circle of the home.

These immigrant people are extremely charitable. If they do not know where the next meal is to come from they will share with those worse off than they, and take them into their homes. An Italian family was evicted for failure to pay the rent on a miserable little shack. They found refuge with another family who themselves had asked for financial aid, and who had so little room that in order to make a place for the evicted family, a baby's bed must be put in the kitchen behind the stove, and some of the children must be taken into bed with the man and his wife. During a period of business depression when many of the men were out of work little immigrant stores dotted here and

there carried their customers' accounts to the limit, trusting that they would be paid when times got better. Some of the accounts amounted to more than \$100. One little Hungarian girl said people owed her father \$1,000 in grocery bills, and until these were paid she could not have shoes and clothes sufficient to go to school.

Not only do they share their sorrows but their joys. The coming of a new baby is a matter of rejoicing to the whole neighborhood. One evening a man went to the store to select an outfit of clothing for a new baby. As he turned over the little garments he squared his shoulders and his eyes shone—for a baby whose only claim on his affections was the fact that its parents had once lived for a short time in his house.

They are quite sociable, visiting much at each others' houses. A special friend is affectionately referred to as partner. Not only do they visit much among each other, but they enjoy visiting with Americans whenever chance offers, and are grateful and appreciative of visits from Americans. One American lady, who, because of her rare sympathy and ready understanding, counts her friends among the immigrants by the scores, is the recipient of all sorts of things. As she was passing along the street one day, an immigrant woman stopped her, ran into the house, dug out from an old-fashioned trunk a table cover of beautiful hand-crocheted lace, and with a brief "Tomorrow Christmas", pressed the gift into the lady's hand. On another occasion two young Greek fellows brought to her home a large package wrapped in many thicknesses of paper. As they awkwardly extended the package they stammered "for you", and a careless movement of the lady's hands as she wonderingly received it brought out the sharp exclamation "You break it!" On unwrapping the bundle there was disclosed a gorgeous wedding-cake—the gayest thing one could hope to see. It was eighteen inches square and of three stories, with pink, yellow, and green icing, the whole decked with artificial flowers and green leaves.

They are always polite, especially to those who have befriended them. However, their courtly graces and quaint Old World bows to American ladies contrast somewhat curiously with their constant use of profanity, English words early acquired from American labor bosses and fellow-workmen, and used by the immigrants with no intended disrespect, but merely to air their knowledge of English.

Very pathetic sometimes are the situations due to differences between labor conditions in America and Europe. Some of these peasant immigrants are highly skilled hand-workers in their native country, but must drop to the ranks of unskilled labor in this country because there is no place for their particular kind of skill in American industrial processes. For example, skilled shoemakers in the old country are accustomed to making the whole shoe and cannot bring themselves to work in shoe factories where they must be confined to work on parts, or mechanical processes only. They do not go into repair shops—they want to *make shoes*. So it is with watchmakers and wood-carvers. They find themselves without a trade in this country, simply because there is no demand for their special kind of skill.

As in any American community, the amusements of the immigrants vary with the facilities at hand. The picture shows are crowded with spectators of which 90 per cent are immigrant men. Some families do go as families, and some women and young people, but mostly men. Many men go to the saloon to visit, partly because of poor housing conditions.¹¹ Poolrooms and clubrooms are largely patronized, especially by the Greeks, most of whom do not have families in this country.

Many of their amusements are, however, racial or national in character. The Italians, for example, have their own dramatic club, and certain national clubs have social features, as the Croatian Sokol Society. They are very fond of dancing and feasting, and it is a poor sort of occasion which is not celebrated with one or the other or both. In some cases christenings are followed by dances and feasts at which gifts of money are made to the baby—money to be put in the bank till he is 21 years old. Weddings, too, are often followed by a feast and a dance at which each man makes to the bride a certain gift in money for the privilege of dancing with her. At the end of the dance the bride may find herself in possession of a considerable sum of money—enough to pay for her trousseau and furniture for her home. Some of the well-to-do bridegrooms with advanced American notions are beginning to object to this custom of giving money to the bride as reflecting on their ability to provide for her financially.

The women in the home cling longest to native customs. It is they who wear the native costumes, who wear the short, full skirts and the kerchiefs. Many of them wear black, and

¹¹In 1916. Before national prohibition. See Preface.

even in the hottest parts of the summer they can be seen on the streets in heavy black woolen skirts and white waists. Only the younger women and those most advanced in the process of Americanization wear corsets. In their eagerness to adopt American fashions of dress, some ludicrous effects are achieved—such for example as the wearing of white or gay-colored satin party dresses on the streets in broad daytime.

The women in the home learn English very slowly. The men feel that they have to learn the language of the country, but the mothers seem to have little desire to learn. They seem to fear the ridicule of their children, who as very little tots acquire a knowledge of at least the one universal English word "sure" which they use on every occasion in answer to every question put to them in English whether they understand it or not.

These women do so many things for themselves that American women have long ago given up. They bake their own bread, half-sole their children's shoes, make their own sauerkraut in the fall, and otherwise prepare for the winter. Many of them make beautiful crocheted lace, executing the most intricate patterns very swiftly. They crochet little jackets, bedspreads, scarfs, pillow-cases, lace insertion and edging.

Children are taught in the home many things concerning the mysteries of human life. While such things are talked of freely and quite plainly, they are not talked of unnecessarily, and the discussion is never accompanied by giggling and silly actions. One family had lost a baby on a shipboard on the way over from the old country. The little girls in the family were so happy when they were told that a new baby was to come into the home. It was beautiful to see them help their mother with the little clothes, and very pathetic to see their heart-broken grief and disappointment when the baby lived only a few days to wear the clothes.

These New Immigrants, especially the younger ones, are eager to become Americans and to be so regarded. It is altogether unfortunate that in the process of so-called Americanization they should take on so many of the less desirable qualities of our native born Americans at the expense of so much that is fine and beautiful in their own natures, so much that is worth preserving in their native manners and customs. Nothing is left untouched in the process. Their very names suffer by the change. The beautiful Roumanian name Paraschina Rotarin has become Pearl Rotar; the Croatian family name Millocivich has

become Miller; the Polish family name Kienzynski has become Kirsh; the Polish Christian name Kalada is Clara; Wladislaw is Walter; Aniello, Nellie; and Michaelo, Mike, etc. These changes take place in the mills, in the offices, in the shops, wherever the immigrants come in contact with Americans—even in the public schools. Great inconvenience is often caused by such changes. For example, a man whose name is Majerski had no little difficulty in proving his right to an inheritance in his native country because a clerk in the mills was too hurried to get his name correct and the man himself too indifferent to insist that Majerski and Morris are not the same!

The population of Gary has grown so fast that United States Census figures for the year 1910 cannot be taken as a basis of a study of the same population in 1913, 1914, 1915, or 1916. In the absence of accurate data for these years, however, some profit can be obtained from a study of the census figures of 1910. Census figures are also unsatisfactory in the matter of race and nationality for they are based on country of birth and not on race and nationality, the disparity in the figures for which has been discussed above.

In the United States Census for 1910 for the population of Gary, information is given as to the total number of population and rate of growth; color and nativity; country of birth of the foreign born and country of birth of the parents of the native born of foreign parentage; sex; age groups 6 to 14, 6 to 20, and males 21 years of age and over; illiteracy; school attendance by ages; and dwellings and families. In this introductory survey of the general population of Gary, this outline is followed in general. Figures obtainable from any other source and for any other years have been made use of. Wherever possible, comparisons have been made with the population of the state of Indiana and of the United States.

It is difficult to get correct figures for the population of Gary for any years except 1906, the year it was incorporated, in the beginning of which the population was nothing, and the year 1910 when the United States census figures were taken, in which year the population is 16,802. The population increased from nothing to 16,802 in four years. A knowledge of the growth of the industries and the development of the town since 1910 leads to the conclusion that a study of the population in 1914, 1915, 1916 cannot be based on figures for 1910.

Some reliable estimates have been made of the number of population for various years—estimates entirely consistent with the census figures and with conditions in the city of Gary. Table 1a shows the population of Gary by years from 1906 to 1916, inclusive.

1a. POPULATION OF GARY, BY YEARS 1906-1916¹²

1906	1908	1909	1910	1911	1912	1914	1915	1916
	10,223	10,246	16,802	21,000	30,000	43,000	37,000	40,000 January 1.

1b. PER CENT OF INCREASE IN POPULATION, 1900-1910, IN GARY AND RATE OF INCREASE IN URBAN POPULATION IN LAKE COUNTY, IN INDIANA, AND IN THE UNITED STATES¹³

Gary ¹⁴	Lake County	Indiana	United States
16,802 per cent	198.3 per cent	30.5 per cent	34.8 per cent

In 1908 it was estimated that the population was 10,223; in 1909 a census was taken by the Gary Land Company, showing 10,246; in 1910 the United States census figures are given as 16,802; in 1911 an estimate in round numbers was made as 21,000; in 1912 as 30,000; in the years 1914, 1915, and 1916 the United States postal authorities obtained figures showing for 1914 a population in round numbers of 43,000; in 1915 because of the business depression the figures fell to 37,000, and the first part of 1916 rose again to 40,000 in round numbers. Thus, it will be seen that in 10 years the population rose from nothing to 40,000, and the rate of increase may be said to be 40,000 per cent for this 10-year period, if for the sake of the mathematical calculation it is considered that in 1900 the population was one.

Table 1b shows the per cent of increase of population from 1900 to 1910 in Gary and the rate of increase of the urban population in Lake county (the county in which Gary is situated), in Indiana, and in the United States. These two tables show the

¹²Independent 70:337; U.S. Census, 1910, Vol. II, p. 531; Survey 29:781, 88, 91; Survey 22:20, 31, 33; McClure's 41:66; Putnams 5:652.

¹³U.S. Census, 1910, Vol. II, pp. 556, 548; U.S. Census, 1910, Vol. I, p. 60.

¹⁴For the sake of the mathematical calculation the population of Gary in 1900 is considered to be one.

abnormally rapid growth of the population of Gary with respect to the urban population of the county, the state, and the nation.

Table 2 shows the proportions by color and nativity of the population of Gary, of Lake county, of Indiana, and of the United

2. PROPORTIONS BY COLOR AND NATIVITY OF THE POPULATION OF GARY, OF LAKE COUNTY, OF INDIANA, AND OF THE UNITED STATES IN 1910¹⁵

	Gary Per cent	Lake County Per cent	Indiana Per cent	United States Per cent
Native white of native parentage....	26.7	31.1	78.9	53.8
Native white of foreign or mixed parentage.....	21.9	31.5	13.0	20.5
Foreign born white.....	49.1	36.7	5.9	14.5
Negro.....	2.3	0.6	2.2	10.7
Other.....	.....	0.1	.....	0.5

States for the year 1910. The population of Gary is abnormal in color and nativity composition in its unduly large proportion of foreign born and of native born of foreign or mixed parentage.

The population of Gary has come from all parts of the United States and from many foreign countries. In determining nationalities in the population of Gary, the United States figures are not satisfactory because they give only country of birth, and this, where either the individual or both his parents were born in foreign countries. Table 3a shows by number and per cent the country of birth of the foreign born in Gary, in Indiana, and in the United States. Table 3b shows by number and per cent the country of birth of the parents of native born children of foreign parentage in Gary, in Indiana, and in the United States. From these tables it will be seen that the foreign born population of Gary is abnormal with respect to Indiana and the United States in its high proportion of persons born in the countries of the New Immigration, and the low proportion of those born in the countries of the Old Immigration; the native born population of foreign parentage is abnormal in its generally high proportion of persons whose parents were born in the countries of the New Immigration and correspondingly low proportion of those whose parents were born in the countries of the Old Immigration. In 1908 a census was taken by the Gary Land Company of the total population of Gary by nationality. The result of this census,

¹⁵U.S Census, 1910, Vol. I, p. 1033; Vol. II, pp. 568-548.

3. PROPORTIONS BY COUNTRY OF BIRTH IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910

	a. Foreign Born ¹⁶				b. Parents of Native Born Children of Foreign Parentage ¹⁷			
	Gary		Indiana Per cent	United States Per cent	Gary		Indiana Per cent	United States Per cent
	Num- ber	Per cent			Num- ber	Per cent		
Austria.....	2,228	27.0	7.4	8.7	506	17.0	2.4	5.5
Canada, French..	8	0.1	0.5	2.8	10	0.4	0.4	2.6
Canada, other...	195	2.4	3.1	6.1	44	1.5	0.7	2.4
Denmark.....	30	0.4	0.6	1.3	.....	.....	0.3	1.1
England.....	173	2.1	6.1	6.5	104	3.6	3.9	4.6
France.....	9	0.1	1.5	0.9	8	0.3	1.4	0.6
Germany.....	526	6.4	39.0	18.5	699	24.0	59.9	30.3
Greece.....	218	2.6	0.9	0.7	.....	.....	.....	0.0
Holland.....	26	0.3	1.3	0.9	9	0.3	0.9	0.9
Hungary.....	1,976	24.0	9.0	3.7	324	11.1	1.9	1.5
Ireland.....	197	2.4	7.1	10.1	312	10.7	11.6	16.6
Italy.....	639	7.7	4.3	9.9	100	3.4	0.9	5.4
Norway.....	46	0.5	.....	3.0	23	0.8	.....	3.2
Russia.....	1,086	13.2	6.0	11.9	247	8.5	2.1	6.8
Scotland.....	79	1.0	2.2	1.9	56	1.9	1.3	1.4
Sweden.....	147	1.8	3.2	4.9	103	3.6	2.3	4.2
Switzerland.....	5	0.1	1.7	0.9	2	0.1	1.4	0.7
Wales.....	22	0.3	1.0	0.6	31	1.1	0.6	0.7
Other foreign....	629	7.6	5.1	.....	341	11.7	8.0	.....

shown in Table 4, shows the total population of Gary as 10,246, comprising 29 races or nationalities. Less than 50 per cent are of English-speaking nations, Americans and persons from the Old Immigration countries making up 48.1 per cent of the total, those of the countries of the New Immigration 49.2 per cent, the Asiatic Immigration 0.3 per cent, and the Colored 2.4 per cent.

¹⁶U.S. Census, 1910, Vol. I, p. 1033; Vol. II, pp. 568, 548.

¹⁷U.S. Census, 1910, Vol. I, p. 781; Vol. II, pp. 548, 568; U.S. Census, 1910, Vol. I, p. 877; Vol. II, pp. 548, 568.

4. NATIONALITY BY NUMBER AND PER CENT OF THE TOTAL POPULATION IN GARY IN 1908¹⁸

	Number	Per Cent
Slovenians.....	300	2.9
Hungarians.....	325	3.2
Croatians.....	950	9.3
Bohemians.....	125	1.2
Servians.....	1,000	9.8
Montenegrins.....	375	3.7
Turks.....	40	0.4
Macedonians.....	100	1.0
Armenians.....	25	0.2
Greeks.....	40	0.4
Russians.....	150	1.5
Poles.....	1,100	10.7
Germans.....	150	1.5
Belgians.....	15	0.1
French.....	6	0.1
Norwegians.....	75	0.7
Swedes.....	125	1.2
Danes.....	15	0.1
Finns.....	20	0.2
Italians.....	350	3.4
Japanese.....	10	0.1
Negroes.....	250	2.4
Welsh.....	50	0.5
Jews.....	150	1.5
Irish.....	4,500	43.9
Scotch.....		
English.....		
Canadians.....		
Americans.....		
Total.....	10,246	

Table 5 shows the proportion of sexes by number and per cent in Gary, in Indiana, and in the United States in 1910 by color. There is a much greater proportion of males in the population of Gary than in either the state of Indiana or the United States, because of the very large proportion of immigrants among whom the proportion of males is always very high.¹⁹ In the negro population the proportion of males is greater than of females but does not show such wide difference as in the white population. Aside from the number of immigrants as an explanation of the greater proportion of males in the Gary population is the fact of the newness of the city. For among the native born Americans

¹⁸"Satellite Cities", Graham Romeyn Taylor, Survey 29: 196. Table made by Gary Land Company.

¹⁹U.S. Census, 1910, Vol. I, p. 248; Vol. II, pp. 549-568.

5. PROPORTION OF SEXES BY NUMBER AND PER CENT IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910 BY COLOR²⁰

	Gary		Indiana Per cent	United States Per cent
	Number	Per Cent		
Male.....	11,521	68.6	51.2	51.5
Female.....	5,281	31.4	48.8	48.5
White male.....	11,263	69.1	51.3	51.6
White female.....	5,140	30.9	48.7	48.4
Negro male.....	242	63.2	51.5	49.7
Negro female.....	141	36.8	48.5	50.3

the number of males is proportionally high because many men at work and in business in Gary have not yet established themselves and sent for their families.

The United States Census for 1910 gives figures for three age groups, 6 to 14 years (the compulsory school age in Indiana), 6 to 20 years, and males 21 years of age and over in the Gary

6a. PROPORTIONS OF AGE GROUP 6 TO 14 YEARS IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910²¹

Total population 6 to 14 years of age, Gary.....	9.8 per cent
Total population 5 to 14 years of age, Indiana.....	19.3 per cent
Total population 5 to 14 years of age, United States.....	20.5 per cent

6b. PROPORTION OF AGE GROUP 6 to 20 YEARS IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910

Total population 6 to 20 years in Gary.....	18.9 per cent
Total population 6 to 20 years in Indiana.....	28.8 per cent
Total population 6 to 20 years in United States.....	30.6 per cent

6c. PROPORTION OF MALES 21 YEARS OF AGE AND OVER IN GARY, IN INDIANA, AND IN THE UNITED STATES, IN 1910

Total number males 21 years of age and over in Gary.....	51.5 per cent
Total number males 21 years of age and over in Indiana...	30.5 per cent
Total number males 21 years of age and over in United States.....	29.4 per cent

²⁰U.S. Census, 1910, Vol. I, p. 248; Vol. II, pp. 549-568.

²¹U.S. Census, 1910, Vol. I, pp. 298, 1033; Vol. II, pp. 568, 542.

population. Tables 6a, 6b, and 6c show these figures compared with corresponding figures for Indiana and the United States, except that in Table 6a the age group for Indiana and the United States is 5 to 14 years instead of 6 to 14. In comparison with figures for Indiana and the United States the Gary population shows an abnormally low proportion of persons 6 to 14 years of age, and 6 to 20 years of age, but an unduly large proportion of males 21 years of age and over; facts due both to the large number of immigrants, among whom the proportion of very young persons is normally low and the proportion of males above the age of 16 is normally high, and also to the newness of the city, a condition which would normally attract an unusually large number of men in the most productive years of life.

Tables 7a and 7b show the proportions in the age groups 6 to 14 years, and males 21 years of age and over according to color and nativity in Gary, in Indiana, and in the United States.

7a. PROPORTIONS OF AGE GROUP 6 TO 14 YEARS BY COLOR AND NATIVITY IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910²²

	Gary Per Cent	Indiana Per Cent	United States Per Cent
Native born white of native parentage..	34.6	86.6	59.3
Native born white of foreign or mixed parentage.....	45.0	10.2	24.1
Foreign born white.....	1.2	1.0	3.5
Negro.....	1.2	1.9	12.7
Other.....	.....	0.3	0.4

7b. PROPORTION OF MALES 21 YEARS OF AGE AND OVER BY COLOR AND NATIVITY IN GARY, IN INDIANA, AND IN THE UNITED STATES

	Gary Per Cent	Indiana Per Cent	United States Per Cent
Native born of native parentage.....	22.4	72.5	49.6
Native born of foreign or mixed par- entage.....	9.4	14.2	17.4
Foreign born white.....	65.7	10.8	22.6
Negro.....	2.3	2.5	9.5
Other.....	0.2	.....	0.9

²²U.S. Census, 1910, Vol. I, pp. 298, 1033; Vol. II, pp. 542, 544, 568.

In relation to Indiana and the United States, Gary shows in the age group 6 to 14 years of age a much smaller proportion of native born white of native parentage, a larger proportion of native born white of foreign or mixed parentage, a very much larger proportion of foreign born white, and about the same proportion of negroes. In the same fashion in the group, males 21 years of age and over, the Gary population shows an abnormally low proportion of native white of native parentage, a low proportion of native born white of foreign or mixed parentage, a higher proportion of foreign born whites, and a smaller proportion of negroes. These facts bear out the conclusions above as to the effect of large numbers of immigrants and the newness of the city on the proportions of age groups.

Table 8 shows the proportion of those attending school in Gary, in Indiana, in the United States in 1910 in the age groups a, 6 to 14, and b, 6 to 20 years. In the age group 6 to 14 years

8a. SCHOOL ATTENDANCE IN THE AGE GROUP 6 TO 14 YEARS
IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910²³

Gary.....	82.4 per cent
Indiana.....	88.2 per cent
United States.....	81.4 per cent

8b. SCHOOL ATTENDANCE IN THE GROUP 6 TO 20 YEARS OF
AGE IN GARY, IN INDIANA, AND IN THE UNITED
STATES IN 1910

Gary.....	49.2 per cent
Indiana.....	66.0 per cent
United States.....	62.3 per cent

Gary shows a little higher proportion of school attendance than the United States, and somewhat lower than Indiana. Since this age group is that affected by the attendance law in Indiana, the figures here are of little significance in indicating the attitude of the Gary population toward school attendance. It is in the age group 14 and 16 up to 20 in which children are not required by the Indiana law to go to school that significant results may be found. Here it will be seen that a much lower proportion attend school in Gary than in either Indiana or the United States because of the number of immigrant children of the common laboring

²³U.S. Census, 1910, Vol. I, p. 1098; Vol. II, pp. 542, 568.

classes, where children go to work at a very early age, and also to the industrial character of the community which furnishes work for them.

Table 9 shows the proportion of foreign born male persons 21 years of age and over in Gary, in Indiana, and in the United

9. PROPORTION OF FOREIGN BORN MALES 21 YEARS OF AGE AND OVER IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910 ACCORDING TO CITIZENSHIP²⁴

	Gary Per Cent	Indiana Per Cent	United States Per Cent
Naturalized.....	17.8	47.8	45.6
First papers.....	24.8	15.0	8.6
Alien.....	53.8	20.6	34.1
Unknown.....	3.6	16.6	11.7

States in 1910 who were naturalized, who had taken out first papers, were alien, or unknown. In relation to Indiana and the United States, Gary shows a smaller proportion of naturalized foreign born, a larger proportion of those having taken out first papers, but a larger number of aliens. This difference is largely due to the greater proportion of immigrants of those nationalities coming most recently to the United States among which the proportion of aliens is always large, partly because many have not been in this country long enough to become citizens, and without doubt partly because there is a large number of the "construction gang" type of immigrant, who moves about frequently from place to place.

Table 10 shows the proportions of illiterates in Gary, in Indiana, and in the United States in 1910: 10a, all persons 10

10a. PROPORTION OF ILLITERATES 10 YEARS OF AGE AND OVER, AND MALES 21 YEARS OF AGE AND OVER IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910²⁵

	Gary Per Cent	Indiana Per Cent	United States Per Cent
10 years of age and over.....	9.26	3.1	7.7
Males 21 years of age and over.....	11.4	4.1	8.4

²⁴U.S. Census, 1910, Vol. I, p. 1067; Vol. II, pp. 549, 568.

²⁵U.S. Census, 1910, Vol. I, pp. 1186, 1257; Vol. II, pp. 568, 549.

10b. PROPORTION OF ILLITERATES 10 YEARS OF AGE AND OVER IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910 BY NATIVITY AND COLOR

	Gary Per Cent	Indiana Per Cent	United States Per Cent
Native white.....	0.4	61.8	27.8
Foreign born white.....	97.1	27.4	29.9
Negroes.....	2.5	10.5	40.4

years of age and over, and males 21 years of age and over; 10b all persons 10 years of age and over according to nativity and color. In relation to Indiana and the United States, Gary has an undue proportion of illiterates especially in the group males 21 years of age and over which would indicate that the high proportion of illiteracy may be due to the presence of the number of immigrants who have come to this country over the school age. This conclusion is borne out by Table 10b which shows a very low proportion of illiterates among the native born whites, a very high proportion of illiterates among the foreign born whites, and a low proportion of illiterates among negroes 10 years of age and over in relation to Indiana and the United States.

In the United States Census of 1910 a dwelling-house is defined as a place in which one or more persons regularly sleep—not necessarily a house; but a boat, a tent, a freight car, or a room in a warehouse tho occupied by only one person.²⁶ On the other hand, an entire apartment house, tho containing many families, is considered as one dwelling. The same census defines a family as a household or group of persons, whether related by blood or not, who live together as one household, usually sharing the same table. One person living alone is counted as one family, while on the other hand the occupants of a hotel or institution, however numerous, are also treated as forming one family. Unsatisfactory as these two definitions are to one interested in housing and family conditions, they do have the value of uniformity and so serve as a basis of comparison. Table 11 shows the number of dwellings and families in Gary, in Indiana, and in the United States in 1910, and the average number of families to a dwelling, the average number of persons to a dwelling, and the average number of persons to a family. The proportion of families to

²⁶U.S. Census, 1910, Vol. I, p. 1285.

11. NUMBER OF DWELLINGS AND FAMILIES IN GARY, IN INDIANA, AND IN THE UNITED STATES IN 1910 ACCORDING TO FAMILIES AND PERSONS²⁷

	Dwellings	Families	Families per Dwelling	Persons per Dwelling	Persons per Family
Gary.....	2,233	2,920	1.3	7.5	5.8
Indiana.....	631,554	654,891	1.0	4.3	4.1
United States...	17,805,845	20,255,555	1.1	5.2	4.5

a dwelling is somewhat higher in Gary than in Indiana or in the United States. Were the definition of family based on blood kinship the proportion of families to a dwelling in Gary would undoubtedly be much higher because of the great number of immigrants who, unrelated by blood, form the kind of household described in the census as "sharing one table". Gary shows a considerably higher proportion of persons to a dwelling than does Indiana or the United States, because of the greater proportion of immigrants who often live crowded together in tenement houses and shacks. The number of persons to a family is also somewhat greater in Gary than in Indiana or in the United States. This does not mean, however, that in Gary the family group determined by ties of blood averages 5.8 persons as given in the table, because as referred to above the census defines a family as "a single household or group of persons usually sharing the same table", and this would leave out of account children who do not live at home, which in the Gary population would probably not affect the results much; and also unrelated boarders in immigrant households, as well as those unrelated groups of immigrant men living together, keeping house on a sort of community plan, sharing the same table, which facts would very much affect results in the Gary population.

These statistics show that the population of Gary differs from that of Indiana and of the United States in rate of growth, color and nativity composition, sex and age composition, school attendance of those over 14 and 16 years of age, citizenship of its foreign born, illiteracy, and number of persons to a dwelling. Quite as significant, however, in differentiating the population of Gary as a population with properties peculiar to itself are certain

²⁷U.S. Census, 1910, Vol. I, p. 1285; Vol. II, pp. 549, 569.

fundamental facts which cannot be measured statistically, but which must be considered in a purely descriptive fashion as in this introductory survey of Gary and its population. Such facts are, for example, the pioneer spirit of the people, the great numbers of men without their families, unusual ties of friendship among the immigrants often taking the place of ties of blood, etc.: facts which immeasurably influence the reactions of this population to conditions of American life.

II. Juvenile Delinquency and Adult Crime

1. STATEMENT OF THE QUESTION

It has long been the popular belief, supported until very recently by the weight of scientific opinion, that the immigrants in the United States furnish proportions to juvenile delinquency and adult crime far in excess of their proportion in the general population. In proof of this view United States census figures from 1850 to 1890 are cited, figures showing that, in every decade, while in the general population the number of native born whites is far in excess of the foreign born, in the juvenile delinquent and adult criminal population the number of the foreign born is far in excess of the native born whites.¹

In the special Report of the United States Census on Prisoners and Juvenile Delinquents in 1904, John Koren subjects these figures for the United States to a more searching analysis.² He shows that conclusions unfavorable to the foreign born, drawn from comparisons of the relative proportions of native born whites and foreign born whites in the criminal population, as given in previous United States census reports, are unfair to the foreign born because the age bases of the comparison are unequal. For the prison population of both native and foreign born is chiefly of persons over 15 years of age, while the general population of native born whites includes *all* ages, and of the foreign born whites chiefly persons 15 to 40 years of age. Comparing the native born whites and the foreign born on the same age basis he finds that the figures are not so unfavorable to the foreign born as formerly believed. In adult crime, in major offenses the native born whites contribute a higher relative proportion than the foreign born, but in minor offenses the foreign born contribute a higher relative proportion than the native born. Koren suggests that the explanation for this preponderance of the foreign born in minor offenses may lie in the fact that the foreign born are more highly concentrated in urban communities where minor offenses are more severely punished.³ In juvenile delinquency also, children of foreign parentage show higher proportional

¹Drähms, p. 170; U.S. Census, 1890, Table 4, p. 126 (Vol. on Penal and Benevolent Institutions).

²Lydston, p. 133; Koren, pp. 18, 19, 41, 40, 28; Commons, p. 168.

³Koren, pp. 41, 29.

numbers than those of native born white parentage.⁴ It is also true that in juvenile delinquency and in both major and minor offenses in adult crime⁵ the colored show higher proportional numbers than the native born whites.⁶

That is, when the foreign born, the colored, and the native born whites are reduced to the same age basis, their comparison still shows that in juvenile delinquency and petty adult crime the foreign born and the colored show higher proportions relative to their representation in the general population than the native born; that in major offenses the native born whites show higher relative proportions than the foreign born, and the colored higher relative proportions than the native born whites.

Koren's suggested specific explanation of this unfavorable showing of the immigrants in juvenile delinquency and petty adult crime—namely, the concentration of the foreign born in urban communities where minor offenses are more severely punished—is but a part of a more general and more complex explanation. The fact that the immigrant and the colored contribute an undue proportion to juvenile delinquency and petty adult crime is not only true for the United States as a whole, including both urban and rural communities, but will also be found to hold true in the limits of a single urban community where immigrants, colored, and native born live side by side. The relation of these groups to juvenile delinquency and adult crime may still be said to be determined by "concentration in an urban community". But this determinant must be expanded into its two important facts: the degree of concentration of each race or nationality group, and the part of the community in which each group is concentrated; two specific facts whose explanation lies back in a more general fact—that of the social and economic class to which each group belongs. For in general a high degree of concentration in the poorer districts of urban communities is an association of the low social and economic classes, while a relatively low degree of concentration in the better districts of urban communities is an association of the higher social and economic classes.

Altho certain individuals of the New Immigration and of the Colored are engaged in business or the professions, and altho

⁴Koren, pp. 17-28; Bryce, Vol. II, p. 478; Commons, p. 170.

⁵Koren, pp. 232-237, 17-28.

⁶Bryce, Vol. II, pp. 476, 478, 557; Lydston, p. 119; Jenks and Lauch, p. 51; Haskins, pp. 147, 150; Breckenridge and Abbott, chap ii, especially pp. 57-59; Symposium: Physical Bases of Crime, 58.

certain individuals of the New Immigration in a few years after coming to the United States rise to the business and professional classes, the great majority belong to the industrial classes; and of these the greatest number are found on the lower levels of the industrial scale.⁷ That is, by far the greatest number of the New Immigrants belong to the economic and social class of the unskilled laborer, and the Colored belong to an economic and social class determined by color as well as by low industrial status.⁸

While children who do wrong are found in every economic and social class,⁹ it is only in the lower economic and social classes that they come to the attention of officers and courts to any great extent. And while adult criminals are to be found in every economic and social class, it is chiefly from the lowest economic and social classes that petty adult offenders are recruited. This is true not only because need is a direct cause of certain kinds of offenses (theft for example) but chiefly because of the unfavorable social conditions in which those low in the economic and social scale live.

Since these lower economic and social classes are made up chiefly of the New Immigrants and the Colored, it is chiefly among these race or nationality groups that the greatest amount of juvenile delinquency and petty adult crime must be expected.

Then if, because of the difference in bases of comparison, it is unfair in crime to compare the immigrant population including chiefly only *certain* age classes with the native born white population including *all* age classes, for the same reason it is obviously unfair to compare the immigrant population and the colored population which include chiefly only the *lower* social and economic classes with the native born white population which includes *all* social and economic classes.¹⁰

Out of these considerations, then, is evolved the general thesis of this study: that the unfavorable relation of the races or nationalities of the New Immigration, and to a certain extent the unfav-

⁷Richmond Mayo-Smith, pp. 150-151.

⁸Jenks and Lauch, pp. 1, 2, 31, 140; Commons, p. 108; Report of Commissioner-General of Immigration, 1906, Table VIII, p. 28; Bryce, Vol. II, pp. 300, 476, 482, 489, 514, 519, 557, 791; Steiner (On the Trail of the Immigrant), p. 24; Report of Immigration Commission, pp. 4, 8, 9, 37, 39, 540, 589, 493, Table on Occupations by Races.

⁹Breckenridge and Abbott, p. 70; Report of Board of Trade (692OH3), pp. xv, xvii, xxi, xxiii, xlviii; Booth (Social Classes), p. 8; Ward, Publications of the American Sociological Society, pp. 9-11 (6739As2); Travis, pp. 33-34; "Standard of Living," Streightoff, American Sociological Society, p. 63 (6739As3); Streightoff, p. 3; Morrison (Juvenile Offenders), pp. 154-159, 162, 168, 169, 170; Lombroso (Crime, Its Causes and Remedies), pp. 135, 137; Drähms, pp. 119, 177, 178, 179, 286; Bryce, Vol. II, pp. 557, 476, 478; Richmond Mayo-Smith, p. 151; Aschaeffenburg, pp. 51-168; Aschaeffenburg, p. 106; Steiner (On the Trail of the Immigrant), pp. 273-297.

¹⁰Richmond Mayo-Smith, pp. 150-151.

orable relation of the Colored race, to juvenile delinquency and petty adult crime is determined not by the race or nationality group but by the social and economic class to which these races or nationalities belong.

2. DEFINITIONS

Juvenile delinquency as a pathological social phenomenon must be defined from both the legal and social viewpoint. Legally any child under a certain age, usually 16, who has violated any law of the state or any ordinance of the city or village in which he lives is a juvenile delinquent. Socially, any child who offends against the complex social conditions in which he lives, such conditions usually defined in law, is a juvenile delinquent.¹¹

In juvenile delinquency the chief interest is shifted from the consideration of the *act* of delinquency and from the delinquent himself as a detached individual, to the consideration of the *relation* of the individual to his social environment. The delinquent child is brought into court and his case is heard and disposition made, not on the basis of the act committed, but on the consideration of the circumstances surrounding the commission of the act, the probability of its repetition, the possibility of altering the unfavorable conditions surrounding the child, or the necessity of removing the child from such conditions.¹² That is, in juvenile delinquency the offense is not the prime fact in the delinquency. Nor is the character of the child in itself the significant fact. Mangold says that character and conscience are developmental, and that childhood is the period of formation and fixation of character. Few children coming before the courts have traits of character so formed and fixed that they cannot be changed. Travis shows that for the United States at least from 2 per cent to 10 per cent only of the children coming to the court can be considered as criminal by nature.

The child is essentially unsocial, and childhood is the period of adjustment to the social order. The child's acts of delinquency then can be said to come from "legitimate desires illegitimately gratified",¹³ and not in the majority of cases from any motives in themselves base. That is, as Judge Lindsay says, the child is not immoral but may be unmoral.

¹¹Mangold, p. 221; Richard A. Bolt.

¹²Breckenridge and Abbott, p. 43; Roger N. Baldwin; Mangold, p. 223; Travis, xxvi.

¹³Russell and Rigby (quoting Elmira Year-book, 1892); Introduction to Travis; Mangold, p. 223.

The determination of juvenile delinquency depends then upon the circumstances surrounding the act defined by a law which, aside from actual law breaking, covers almost every species of conduct which is *likely to result* in law breaking and criminality,¹⁴ a law which is therefore capable of exercising preventive control over the child.

From the very nature of the problem any examination into juvenile delinquency must include a study of the individual delinquent and of the circumstances surrounding the acts of delinquency for which under the law the child is brought to the attention of the court.

Crime may be defined as a violation of the laws of the state carrying legal penalties. Wrongs are divided into three classes: sins, offenses against God who inflicts the punishment himself; vices, offenses against natural law having its own penalties; and crimes, offenses against statutory law carrying legal penalties. Clearly the only kind of wrongs that can be measured at present are those against statutory law. Those against moral and physical law can be known only as manifest in violations of statutory law. The use of the word "crime" in this study refers to those wrongs which the law so regards and punishes.¹⁵

A study of crime necessarily involves two points of view: that of the act committed and that of the agent committing the act. In the same study the crime and the criminal may both be considered without any real inconsistency provided the distinction between these two points of view is kept in mind.¹⁶ While formerly attention of society was concentrated on the crime with little regard to the agent committing it,¹⁷ the classical school of criminologists succeeded in turning attention to the study of the criminal as the agent of the act of crime. Altho at the present day the point has not quite been reached in adult crime as in juvenile delinquency, where the theory of the law declares that a criminal shall be tried and a course of treatment prescribed based entirely on the relation of the individual criminal to the particular environment in which he happens to be placed, still the law does recognize degrees of difference in individual criminals, and degrees of difference in various environments. A study of crime in a community then must include a study of

¹⁴Breckenridge and Abbott, p. 43; Mangold, p. 222; Baldwin, p. 12.

¹⁵Boies, pp. 30, 31, 38; Wines, pp. 11, 13, 229, 249; Drähms, p. 5; Robinson, p. 3.

¹⁶Robinson, p. 4; Boies, p. 35; Wines, p. 6.

¹⁷Ferrero, p. 3.

the individual criminals of that community, and the special environment in which the individual is placed.

At present there can be no accurate measure of juvenile delinquency or adult crime in any community. In juvenile delinquency neither the number of cases brought to the court, nor the numbers committed to institutions, nor the number of delinquents known and recognized can be taken as an accurate measure, for many escape detection altogether and many are properly dealt with at home or in school who would otherwise come to the attention of the courts. The amount of adult crime in a community cannot be measured by the number of criminals confined in institutions, because this number leaves out of account those who have been judged guilty of crime but who have escaped the penalty of imprisonment by the payment of a fine, by a suspended sentence, or some other form of leniency. Neither can the number of criminals brought into the courts indicate the amount of crime, for it is a well known fact that in every community much crime exists without detection.¹⁸ Farrer estimates that 77 per cent of the crimes committed are committed with impunity.¹⁹

Not only is it impossible to determine the exact amount of juvenile delinquency and of adult crime in any community at any given time, but what constitutes juvenile delinquency and adult crime differs in different communities,²⁰ and in the same community from time to time because of differences in laws, differences in vigilance in enforcing laws, and differences in practices of different courts; especially is this last true of juvenile delinquency where there are such wide variations in the methods of the courts.

These facts make comparisons of juvenile delinquency and adult crime in different places very difficult and profitable only when general principles and not actual figures are compared.

3. DESCRIPTION OF GROUPS SELECTED FOR STUDY

Materials for this study of juvenile delinquency and adult crime in the population of Gary were secured from four sources in order to cover the field of offenses committed by juvenile delinquents and petty offenses and more serious crimes by adult offenders.

¹⁸Koren, pp. 12, 13.

¹⁹Farrer, p. 100; Boies, pp. 9, 8, 51.

²⁰Boies, pp. 18-35; Devon, p. 165; Koren, p. 15; Morrison (Juvenile Offenders), pp. 4, 7, 8, 29; Aschaeffenburg, pp. 7, 31.

For the study of juvenile delinquency were selected 102 record sheets, the total number of those cases from Gary which came to the attention of the Lake County Juvenile Court thru its probation officers or otherwise officially from October 1, 1912, when permanent comprehensive history records were first introduced in that court, to June 30, 1914, a period of twenty months. The fact is recognized that the number of cases coming to the court cannot represent the whole number of juvenile delinquents in the population of Gary for the period of time covered, but only the detected cases; also that all the cases do not exhibit the same degree of delinquency. In accordance with the definition of juvenile delinquency used in this study, this group includes those juvenile delinquents who are *likely* to become law-breakers and criminals as well as habitual wrong-doers, and those whose cases are settled out of court or who are returned to their parents on probation as well as those who are committed to institutions.²¹

For the study of adult crime were selected the official records of cases in three courts in order to cover both petty and more serious offenders. Under the law of the state of Indiana all crimes and offenses punishable by death or imprisonment in the state prison are felonies; all other offenses against the criminal law are misdemeanors.²²

For Section I of the study of adult crime were selected 3,031 arrest sheets of those persons arrested by the police to be brought before the city court from January 1, 1914, to December 31, 1914, inclusive, a period of twelve months. This court has exclusive jurisdiction of all violations of the ordinances of the city, and original concurrent jurisdiction with the circuit court or criminal court in all cases of petit larceny and all other violations of the laws of the state where the penalty provided therefor cannot exceed a fine of \$500 and imprisonment in the county jail or workhouse not exceeding 6 months or either or both. Only misdemeanors and very minor felonies therefore can be disposed of in the city court.²³

Of the 3,512 cases arrested to be brought into this court 481 were at once discarded as not properly belonging to a study of crime: 348 suspects, 54 witnesses, and 33 cases in which guilt was not proved—cases obviously not delinquents; 19 demented cases, which belong to a study of insanity; 2 drug and delirium

²¹For groups selected for study see Baldwin.

²²Burns, Annotated Indiana Statutes, Revision of 1914, Sec. 1866, Chap. 4, Art. 1.

²³Burns Annotated Indiana Statutes, Revision of 1914, Sec. 8843.

tremens cases, which belong to a study of disease; and 25 juvenile delinquents, which belong to a study of juvenile delinquency. The number retained includes two kinds of cases: first those whose arrest sheet did not indicate a sentence imposed, including those cases released by the police, nolle prossed by the prosecutor, discharged by the judge, dismissed, pending, continued, bound over to the higher courts, released to other officers, and miscellaneous; and second, those cases whose arrest sheets showed a sentence imposed, either fine or jail sentence, or both. Those cases which are fined or sentenced in the court are established as clearly delinquent cases. The cases marked nolle prossed by the prosecutor, released by the police, discharged by the court, and dismissed are included in the study, unless the cases are marked "not guilty", for the reason that in many cases where the prisoner is guilty of petty offenses, certain circumstances influence officers and court to nolle prosee, release, discharge, or dismiss the case; such circumstances as humanitarian reasons on the part of officers and court (for instance sympathy for the large needy family of the prisoner, or some obvious injustice), slight or confused evidence, lack of seriousness of certain offenses (gambling for example), the lack of a uniform, intelligent policy of treatment of certain offenses by the state in general (drunkenness for example), an honest difference of opinion concerning the method of dealing with certain offenses (prostitution for example), and in the case of females a special leniency of the court. Because of these reasons, unless so specified in the arrest sheet, the real guilt of the prisoner cannot be determined. Another class of cases also included in this study is the class in which no immediate ultimate disposition is indicated on the arrest sheet: those pending, continued, bound over to higher courts, released to other officers, and those falling under the head of miscellaneous dispositions. No specific indication of guilt or innocence is contained in the arrest sheets for these cases.

For Section II of adult crime were selected records, filed in the office of the state statistician, of 965 cases from Gary coming into the courts of the justices of the peace from January 1, 1910, to December 31, 1913, a period of four years. Justices of the peace in Indiana have, as conferred by statute, exclusive original jurisdiction in their counties in all cases where the fine assessed cannot exceed \$3, and have concurrent jurisdiction with the criminal court and circuit court to try and determine all cases of misdemeanor punishable by fine only, and in trials before justices

finer to the extent of \$25 with costs may be assessed; and they have jurisdiction to make examination in all cases but no power to adjudge imprisonment as a part of their sentence except in lieu of payment of fines assessed.²⁴ Only misdemeanors, therefore, can be disposed of in the courts of the justices of the peace.

For Sections III and IV of adult crime were selected official records in the Lake county jails of 123 cases from Gary convicted of felonies in the Lake County Circuit and Superior Courts and the city court of Gary, and sentenced to the various penal institutions in the state, from January 1, 1910, to December 31, 1915, a period of six years. The circuit and superior courts have original exclusive jurisdiction as prescribed by law in criminal cases, except where exclusive or concurrent jurisdiction is conferred by law upon justices of the peace.²⁵ The more serious criminal offenses therefore are disposed of in these courts.

Section III consists of 89 cases of more serious felonies in which the sentence is commitment to the Indiana State Prison at Michigan City, the Indiana Reformatory at Jeffersonville, or the Woman's Prison at Indianapolis; and Section IV of 36 lesser felonies in which the sentence is commitment to the Lake County Jail, the Indiana State Penal Farm at Putnamville, or the Correctional Department of the Indiana Woman's Prison at Indianapolis.

The cases of adults coming into the city court and the justice of the peace courts in general represent petty crimes, while the two sections of those coming into the circuit and superior courts represent more serious crimes.

By taking records of petty offenders as they appear in the courts rather than in jails and prisons, opportunity is given for a wider range of study to include those petty offenders who escape with a fine, and those who profit by the leniency of police, prosecutor, and courts.²⁶

In making this study of adult crime the fact is recognized that, as in juvenile delinquency, these cases by no means represent the total amount of crime, but only those cases detected and dealt with by the officers of the law.

²⁴Burns, Annotated Indiana Statutes, Revision of 1914, Art. 6, Sec. 1493.

²⁵Burns, Annotated Indiana Statutes, Revision of 1914, Sec. 1433.

²⁶Koren, pp. 13-30; Healy, p. 40.

4. DESCRIPTION OF METHOD USED

Juvenile delinquents and adult offenders are treated in this study according to so-called single race or nationality units. These terms, "race" and "nationality", are used in their loose popular sense.²⁷ For example, they cover such groups as American negroes and Slovaks, neither of which can be spoken of properly as a race or a nation; as well as Japanese and Chinese where the terms may be applied properly. In the absence of a term which accurately describes all the divisions, they have been designated according to the answers given to the question, "To what race do you belong?" or "To what nationality do you belong?"—that is, "I am a Slav", "I am a Jew", etc. Altho this method is in many ways unsatisfactory, country of birth as a determinant of race or nationality is much less satisfactory. This becomes apparent when there is considered, for example, such a country as Austria-Hungary, from which alone come 12 races or nationalities, 7 Slavic and 5 non-Slavic—Bohemians, Ruthenians, Bulgarians, Slovaks, Slovenians, Poles, Servo-Croatians, Germans, Roumanians, Magyars, Albanians, and Italians.²⁸ In some of the materials used information both as to race or nationality and country of birth is available and offers much more satisfactory results.

For purposes of this study, however, race or nationality *consciousness* is perhaps after all the important factor. In the study of juvenile delinquency, race or nationality is determined rather by the parentage of the child than by the child himself, because of the fact that race consciousness is usually present in the second generation in the age covered by juvenile delinquency laws; and in the study of adult offenders race or nationality is determined by the individual himself. A slight inaccuracy results from this method because of differences in race or nationality consciousness in the New Immigration and the Old Immigration. For example, American born children of foreign born parents of the New Immigration often assert that they are Americans and that their parents are "foreigners" in answer to the question of race or nationality; while in the Old Immigration, especially among the Irish and the Germans, the third and fourth generation cling to the country of their ancestors.²⁹

²⁷See discussion of race, ethnic groups, etc., the Races of Man, J. Deniker, chaps. viii-ix.

²⁸Emily G. Balch (Our Slavic Fellow Citizens), p. 32.

²⁹It will be noted that this statement was made in 1916 and not in the light of recent events which have brought out in bold relief this characteristic of these two national units.

Juvenile delinquents and adult offenders are treated in this study not only according to so-called single race or nationality units, but these are in turn arranged in six race or nationality groups: Americans, Colored, Old Immigration, New Immigration, Asiatic Immigration, and Other Americans. In the American group are considered cases of native born whites of native born parents; in the Colored group, American negroes of whatever degree of purity; in the Old Immigration group, immigrants of the second generation from those countries of northwestern Europe which furnished the chief immigrant streams to this country prior to 1882;³⁰ in the New Immigration group, peoples from the countries of southern and eastern Europe which have furnished the greatest number of immigrants to this country since 1882; in the Asiatic Immigration group, peoples coming from the countries of Asia; and in the Other American group, American Indians, peoples from countries of North America other than the United States, and peoples from the West Indies. It will be noted from this grouping that the Americans as here used correspond in general to the group of native born whites of native parentage as used in the United States census reports, the Colored with the negroes, the Old Immigration very roughly with the native born whites of foreign or mixed parentage, and the New Immigration very roughly with the foreign born whites. The Asiatic Immigration and Other Americans include such small numbers that they are not of much consideration.

In all, 47 single racial or national units are represented in the study. In the study of juvenile delinquency, 12 single races or nationalities are represented: Americans; Colored; two races or nationalities of the Old Immigration—German and Irish; and eight races of the new Immigration—Croatians, Hungarians, Italians, Lithuanians, Poles, Russians, Servians, and Slavs. No races or nationalities of the Asiatic Immigration or Other Americans are represented among the juvenile delinquents. In Section I of the study of adult crime 47 single racial or national units are represented: Americans; Colored; fourteen races or nationalities of the Old Immigration—Belgians, Danes, English, French, German, Hollanders, Irish, Norwegians, Scotch, Scotch-Irish, Spaniards, Swedes, Swiss, and Welsh; twenty races or nationalities of the New Immigration—Albanians, Austrians, Bohemians, Bulgarians, Croatians, Finns, Greeks, Horoats, Hun-

³⁰Jenks and Lauch; Haskins; U.S. Census, 1910, Vol. I, p. 781; Immigration Commission, Abstract of Reports, Vol. I, 1910-11, pp. 13-27.

garians, Italians, Jews, Lithuanians, Macedonians, Poles, Roumanians, Russians, Ruthenians, Servians, Slavs, and Slovaks; seven races or nationalities of the Asiatic Immigration—Arabians, Armenians, Chinese, Japanese, Korean, Persian, and Syrian; four races or nationalities of Other Americans—Canadians, Cubans, Indians, and Mexicans. In Section II of the study of adult crime, material could be obtained only for nativity and color, and in nativity only foreign born and native born are designated. In Sections III and IV of the study of adult crime 20 single race or nationality groups are represented: Americans; Colored; four races or nationalities of the Old Immigration—Danes, French, German, and Swedes; 10 races or nationalities of the New Immigration—Austrians, Bohemians, Croatians, Greeks, Hungarians, Italians, Poles, Roumanians, Russians, and Slavs; 2 races or nationalities of the Asiatic Immigration—Arabians and Persians; 2 races or nationalities of Other Americans—Canadians and Indians. These racial or national terms used here are the same as those used in the Dictionary of Races compiled by the Immigration Commission, with a few exceptions.³¹ Those given as Hollanders in this study are there given as Dutch, Albanians are there included with the Greeks, Horoats are there given as Hervats, Canadians are there included under French Canadians and English.

In considering juvenile delinquency and adult crime the important fact for society is the determination of causes lying back in the circumstances surrounding the commission of the act of delinquency or crime.³² In delinquency and crime, however, as is true in general in all human phenomena, there is a multiplicity of causes, some direct, some indirect, some near, some remote, and all confused in such a way that it is impossible to assign to any one factor a definite value.³³ Because of this complexity of causes it is thought best to follow the phraseology of a study of Donna Fay Thompson, "The Associations of Dependence in 700 Families", Indiana University, 1914, and discuss the circumstances surrounding the acts of delinquency and crime under the term "associations", rather than causes.³⁴

The discussion of these associations is necessarily limited because of the kind and amount of material available. For

³¹Immigration Commission, Abstract of Reports, 1910-11, Vol. I, p. 217.

³²Rhoades.

³³Lombroso (Crime, Its Causes and Remedies), p. 1; Devon, pp. 18-21; Wines, p. 279; Morrison (Juvenile Offenders), p. 22; Healy, pp. 23, 24, 164, 165.

³⁴Morrison (Juvenile Offenders), p. 1.

juvenile delinquency the record sheets indicate name of child, address, date, complaint, names, ages, and occupation of father, mother, and children, civil condition, race or nationality of father and mother, church of father and mother, income, rent, size of house, length of residence in Gary, and previous residence. In Section I of the study of adult crime the arrest sheets kept on file in the police station at Gary show name of offender, the arresting officer, the charge, place of arrest, residence of offender, birthplace, descent, occupation, civil condition, sex, race, complexion, age, hair, color, moustache, eye color, weight, height, ability to read or write, articles found on prisoner when searched by officers as money, keys, knife, watch and chain, pocketbook, memorandum book, weapons, letters, grips, and miscellaneous articles, with a note as to whom the property was turned over and by what officer, together with receipt of person to whom the property was turned over, and the disposition of the case giving the signature of the person making the report. In Section II of the study of adult crime the records filed in the office of the statistician of the state of Indiana in the statehouse at Indianapolis show the numbers arrested and brought into the court, kind of offense, color, sex, nativity (whether native born or foreign born), and disposition of cases by kind of offense. In Sections III and IV of the study of adult crime the records of the Lake county jails at Crown Point and at Hammond show race or nationality, age, charge, and disposition of the case.

Following in general the classification of Morrison and Wines,³⁵ associations of juvenile delinquency and adult crime are considered in this study under four main divisions: general considerations, individual considerations, cosmic considerations, and social considerations. In juvenile delinquency under general considerations are discussed proportions by race or nationality, kinds of offenses, disposition of cases, and repetition of offense;³⁶ under individual considerations, age, sex, and abnormality; under cosmic considerations, seasonal delinquency;³⁷ under social considerations, maladjustment, association in delinquency, geographical distribution, church affiliation, home conditions, and industrial status. In Section I of the study of adult crime, under general considerations are discussed proportions by race or nationality, kinds of offenses, and disposition of cases; under individual

³⁵Morrison (Juvenile Offenders), p. 21; Wines, p. 277; Aschaeffenburg, xxv, table; Healy, p. 285; Ferri, p. 53; Boies, pp. 27-39.

³⁶Travis, p. 102; Bache; Barnett; Morrison (1897); Bolt.

³⁷N Morrison (Juvenile Offenders), pp. 23, 26, 35, 36.

considerations, age, sex, civil conditions, illiteracy, height and weight; under cosmic considerations, seasonal crime; and under social considerations, birthplace, association in crime, geographical distribution, and industrial status. In Sections II, III, and IV the material is so limited that no arrangement is attempted.

In the study of juvenile delinquency certain considerations are worked out on the basis of case and some of family.³⁸ Case is here used to refer to the individual delinquent no matter how many times he has appeared in court or how many affidavits are filed against him for separate offenses. He remains still one case. In individual considerations, such as age for example, the case is the logical unit, while in certain social considerations, as home conditions for example, the family is the logical unit. In the study of adult crime, however, where the act committed still remains the focus of attention of society, each crime committed is taken as the basis of a case.

Because of the unique character of the city of Gary and its population, because of the short period of time covered by the study, and the comparatively small number of cases, much of the information in this study must stand simply as materials.

³⁸Baldwin.

III. Certain Associations of Juvenile Delinquency

A. General Considerations

1. PROPORTION BY RACE OR NATIONALITY¹

As already stated, 12 single race or nationality units are represented in this study of juvenile delinquency covering 102 cases and representing 86 families.² Of this number, of the race or nationality units, the Americans show the highest absolute proportions followed in order by the Poles and the Slavs. The Servians show the smallest absolute proportions followed in order by the Russians and Irish. Of the groups, the New Immigration shows the highest absolute proportions followed in order by the Americans, the Colored, and the Old Immigration.

In order, however, to determine the true relation of any one race or nationality to juvenile delinquency, the proportion which that race or nationality furnishes to the total number of juvenile delinquents must be compared with the proportion which that race or nationality furnishes to the general population.

Figures at hand indicate that in general the Americans bear about their proportional share, the Old Immigration less, and the Colored and New Immigration more than their proportional share in juvenile delinquency in Gary.

2. KINDS OF OFFENSES³

In juvenile delinquency the kind of offense with which the child is charged in the affidavit does not lead to such definite conclusions as in adult crime, for several reasons: first, the shifting of the emphasis in juvenile courts from the delinquent act in itself and the delinquent child in himself to the relation of the child to his environment, whereby the offense charged is no true measure of delinquency; and second, in most cases the offense is really a very complex matter, consisting of not one offense alone, but of several related offenses any one of which is sufficient to bring the child to the attention of the court. The

¹Original tables, pp. 1-4. See Preface to this study. See also Appendix, Table I.

²See p. 42 of this study.

³Original tables, pp. 4-9. See Preface to this study. See also Appendix, Table II.

offense charged in the affidavit is perhaps the one of which the child is found guilty, the one chosen as being the most fundamental, the most obvious, etc. For example, a child brought into court on a charge of confirmed truancy might just as well have been brought in for theft or incorrigibility, of both of which offenses he is guilty, truancy having been selected as being sufficient to bring the child into court where a course of treatment may be worked out.

In this study the classification of kinds of offense is that used by John Koren in the special report of the United States Census of Prisoners and Juvenile Delinquents in the United States in 1904. This classification divides kinds of offenses into three principal groups: offenses against society, offenses against the person, and offenses against property. In this study offenses against society include incorrigibility, confirmed truancy, and a group of offenses against morals including vicious gangs, immoral girls, obscene language, and indecent conduct; offenses against the person include rape and assault; offenses against property include railway trespass, petit larceny, breaking in and destroying school property; other offenses include the breaking of city ordinances.

Of the groups represented the Americans furnish more than their proportional share of offenses against morals and incorrigibility, less than their share of truancy, and no petit larceny; the Colored show no incorrigibility or truancy cases, but furnish more than their share of offenses against morals and petit larceny cases; the Old Immigration furnishes more than its share of incorrigibility and truancy cases, but no offenses against morals or petit larceny cases; and the New Immigration furnishes less than its share of incorrigibility and offenses against morals, but more than its share of truancy cases, and much more than its share of petit larceny cases.

This study of juvenile delinquency in Gary shows no specific kind⁴ of offense unusual in juvenile delinquency. In juvenile delinquency, offenses against society and against property form the greatest proportion, while offenses against the person play a very small part. In Gary incorrigibility, truancy, offenses against morals, and petit larceny rank highest in proportional numbers.⁵ That is, the kinds of offenses committed by juvenile delinquents in Gary are those most typically juvenile.

⁴Richard A. Bolt, p. 46; George Asbury Stephens, p. 33; Mabel Carter Rhoades; Breckenridge and Abbott, pp. 28-30; Mangold, p. 233; Barnett (Appendix); Koren, p. 233.

⁵George B. Mangold, p. 232

This study does not show the more serious offenses usually shown in studies of this kind elsewhere. This may be due in part to the fact that the number of cases in this study is small, in part to differences in phraseology in different juvenile courts, in part to the fact that in many places juvenile delinquents are dealt with by courts other than juvenile courts where charges of a more serious nature are named, and in part to the fact that this study includes all cases brought to the attention of the court while most studies of the kind include only those cases committed to institutions or placed on probation.

Because of these differences also, exact comparisons of specific kinds of offenses are somewhat difficult. Comparing the per cent of cases furnished to specific kinds of offense in Gary, in the whole of the United States, in Detroit, in Chicago (two studies), in Syracuse, N.Y., in New York City, and in England, considerable variations are noticeable. In comparison with these places Gary shows rather a high proportion of offenses against society, due to the high proportion of offenses against morals included in this class of offenses; a somewhat low proportion of offenses against the person; and about the average proportion of offenses against property.

3. DISPOSITION OF CASES⁶

Disposition of cases in juvenile delinquency is made in Gary in fact and in theory not alone on the basis of the character of the offense committed nor of the character of the child, but on the basis of the relation of the child to his environment. The most serious cases from the point of view of the relation of the child to his environment were committed to institutions, the less serious from this point of view were returned to their homes on probation, and the least serious were dealt with out of court.

The New Immigration shows the highest relative proportion committed to institutions followed in order by the Old Immigration and the Americans; the Americans show the highest relative proportions returned to parents on probation followed in order by the Old Immigration and the New Immigration; the Americans show the highest relative proportion settled out of court, followed in order by the Old Immigration and the New Immigration. The least favorable relations must then exist between the cases of the New Immigration and their environment, and the

⁶Original tables, pp. 9-13. See Preface to this study.

most favorable relations between the American and Old Immigration cases and their environment.

A comparison of the disposition of cases in Gary with that of cases in the states of Massachusetts and Illinois, and the cities of Chicago and Detroit shows no special peculiarity in the disposition of cases in Gary.

4. REPETITION OF OFFENSE⁷

In this study of juvenile delinquency complete records of delinquent children could not be obtained previous to the time of residence of these children in Gary. Since none of these children could have lived in Gary for more than eight years (1906 to 1914) and since most of them have lived there for a much shorter time, the proportion of old offenders given here must be somewhat too low.

Classifying all the cases as to first offenders, old offenders, and offenders with a previous institutional record, the New Immigration shows the highest relative proportion of old offenders followed in order by the Old Immigration and the Americans—the Colored showing no cases of old offenders. The New Immigration alone shows any cases having a previous institutional record. That is, the treatment prescribed for the cases of the New Immigration is much more likely to be unsuccessful than that for the American and Old Immigration cases.

For all cases of all races or nationalities, 18.6 per cent are old offenders, a comparatively low proportion as compared with other communities.⁸

B. Individual Considerations

5. AGE⁹

In juvenile delinquency there exists a direct relation between both age and amount of delinquency, and age and kind of offense.

In this study of juvenile delinquency in Gary, the Americans show the greatest number of cases 14 years of age; the Colored equal numbers 12 and 15 years of age; all the Old Immigration cases are 10 to 14 years inclusive; and the New Immigration shows the greatest number of cases 9 to 12 years inclusive. That is, the cases of the New Immigration are the youngest of all.

⁷Original tables, pp. 13–15. See Preface of this study.

⁸Breckenridge and Abbott.

⁹Original tables, pp. 15–19. See Preface to this study.

For all cases of all races or nationalities, the greatest number are 9 to 14 years of age, with another smaller but distinctive group 13 to 16 years of age. The general average age for the whole group is 12.2 years. These figures show the juvenile offenders in Gary younger than in many communities.¹⁰ This difference is partly due to the fact that this study is based on all the cases coming to the attention of the court and its officers, whereas figures for other communities are based on commitments or else on cases actually brought into the court, in both of which cases the age is naturally higher; partly due to the different kinds of courts dealing with children (for example in Detroit, where in 1903 children were brought into the municipal court); and partly to the fact that in some communities (Chicago for example) truants, for whom the age is always low, are not included among juvenile delinquents. This Gary study includes a very large number of the less serious offenses committed especially by younger children who are not capable of committing the more serious offenses.¹¹

The relation between age and kind of offense is even more striking. This study shows that the age of incorrigibility is 10 to 14 years, of confirmed truancy 9 to 13 years, of offenses against morals 14 to 16 years, of offenses against the person the numbers are too few to offer conclusions, of petit larceny the age is 9 to 16 years, and of all offenses against property the age is 9 to 16 years. The youngest cases are found in confirmed truancy followed in order by incorrigibility, petit larceny, and offenses against property, and offenses against morals, with almost no cases at all of juvenile age of offenses against the person. That is, the least serious cases are found among the youngest children.¹²

The relation between age and kind of offense in juvenile delinquency in Gary is in general the same as is found in other communities.¹³ It will be noted that the New Immigration furnishes the youngest cases and the least serious cases tho the greatest proportion of cases in this study of juvenile delinquency

¹⁰Travis, p. 151; Mrs. Joseph T. Bowen; Richard A. Bolt; Breckenridge and Abbott; Koren, p. 242; Mabel Carter Rhoades.

¹¹W. Douglass Morrison (Juvenile Offenders), p. 57.

¹²American Journal of Sociology, review of "Criminality of Juvenile", 9:283; Richard A. Bolt; Mangold, p. 223; Julia Richman, Journal of the Proceedings of the National Education Association, Denver, July, 1909.

¹³Koren, p. 245; Julia E. Richman, Journal of the Proceedings of the National Education Association, Denver, July, 1909; Mrs. Joseph T. Bowen; Richard A. Bolt; Morrison (Juvenile Offenders), p. 57; Mangold, p. 224.

6. SEX¹⁴

In juvenile delinquency a direct relation exists between sex and amount of delinquency, sex and kind of offense, and sex and age of offenders.

In this study of juvenile delinquency in Gary the Americans show the highest relative proportion of girls followed in order by the Colored and the New Immigration—the Old Immigration showing no cases of girls.

Of the total number of cases of all races or nationalities, 81.4 per cent are boys and 18.6 per cent are girls; that is, there are over four times as many boys as girls. Comparing the proportions of the sexes of juvenile delinquents in Gary, in Detroit (two groups), in New York, in Atlanta, in French institutions, in English reformatories, and in the United States (two groups) there is little variation. The significant fact in all the groups is the great preponderance of cases of boys.

An examination of the relationship between sex and kind of offense in this study shows that of offenses committed by girls by far the greatest proportion, 73.68 per cent, are offenses against morals, while of offenses committed by boys only 8.43 per cent are against morals. This relation between sex and kind of offense in Gary is in general the same as is found in other communities.¹⁵

It will be noted that the Americans furnish the highest proportion of offenses against morals and the highest proportion of girls.

The average age of girls among juvenile delinquents in Gary is 13.8 years and of boys 11.4 years. This higher average age of the girls is to be explained by the fact that most of the offenses committed by girls are offenses against morals the age for which is high, and the lower average age of the boys by the fact that the chief offenses of boys are larceny, truancy, and incorrigibility, for the two latter of which especially the age is low.

Comparing the average ages of girls and boys in groups of delinquents in Gary, in Detroit, and in the United States the figures for Gary show both boys and girls younger than in Detroit and in the United States in accordance with the lower average age of both sexes in Gary as given above. The significant fact is that in all these groups the girls are older than the boys.

¹⁴Original tables, pp. 19-23. See Preface to this study.

¹⁵George Asbury Stephens; Breckenridge and Abbott, p. 35; Koren, pp. 241, 242; Mangold, p. 233.

7. ABNORMALITY¹⁶

At the time when the cases covered by this study of juvenile delinquency in Gary came to the attention of the court there were no facilities whatever for adequate physical and mental examinations. At that time there was not even a detention home in connection with the court so that the cases might be kept under observation for a time. Therefore only those subnormal physical and mental conditions readily apparent can be noted here—as “epileptic, crosseyed, and nearsighted” in one case, and “feeble-minded” in another.

An examination of the cases in this study as to the most apparent physical and mental subnormal qualities shows that the Colored and New Immigration furnish by far the highest relative proportions of subnormal cases followed in order by the American and Old Immigration. Of the total number of cases of all races or nationalities, 24.5 per cent, or almost one-fourth, are subnormal physically or mentally or both, a proportion without doubt lower than the actual facts, if complete information were at hand, would justify. This result is consistent with the general belief that there exists a relation between physical and mental weakness and abnormal conduct.¹⁷

C. Cosmic Considerations

8. SEASONAL DELINQUENCY¹⁸

An examination of the cases of juvenile delinquents in this study arranged according to months of the year in which the offenses were committed shows that the greatest number of cases appear in the summer months followed in order by winter, autumn, and spring. This result is consistent with the statement of Mabel Carter Rhoades, that the greatest amount of delinquency occurs in the summer months as this is the season of adventurous wrongdoing.¹⁹

¹⁶Original tables, pp. 23-25. See Preface to this study.

¹⁷Mangold, p. 230; Cesare Lombroso; Breckenridge and Abbott, p. 147; Travis, xxvi; W. Douglas Morrison (Juvenile Offenders), p. 84; Lilburn Merrill, M.D., National Conference of Charities and Corrections, Seattle, 1913; Margaret Otis, Survey 32:488; Bert Hall, Journal of Proceedings of the National Education Association, Denver, July, 1919, p. 217; Julia E. Richman, same, p. 222; Richard A. Bolt.

¹⁸Original tables, pp. 25, 26. See Preface to this study.

¹⁹Mabel Carter Rhoades.

D. Social Considerations

9. MALADJUSTMENT—LENGTH OF RESIDENCE IN GARY AND RESIDENCE PREVIOUS TO COMING TO GARY²⁰

Gary was incorporated in 1906 and became a city in 1909, so that length of residence in Gary of any of its population is necessarily limited.

An examination of the length of residence in Gary of the juvenile delinquents in this study shows that the greatest number of these delinquents have come very recently to Gary, especially among the New Immigration. Information is not available as to length of residence in the United States for either the Old or New Immigration.

Information is given, however, as to place of residence just previous to coming to Gary. In the New Immigration where information is given, in only three families did the parents come directly from the old country; two Polish families from Austria, one eight years and one a year and a half before; and one Slavish family from Austria two years before. Among those having lived elsewhere in the United States before coming to Gary, seven states are represented. Many of the families came from nearby industrial communities and cities, a large proportion from Chicago. The rest came principally from industrial communities in the eastern industrial states.

That is, the only kind of community to which most of the New Immigration families have been accustomed in America is the industrial community, in striking contrast to the experience of many of these families in the old country. While many of these families show a breadth of experience in having moved from one industrial community to another since coming to America, this very experience may be immeasurably expensive in its effect on child life because of confused standards of morality, of social customs, legal restrictions, etc.

10. ASSOCIATIONS IN DELINQUENCY—GROUPS AND GANGS AND BAD ASSOCIATES²¹

Many juvenile offenses are the result of association of delinquents in groups and gangs.

An examination of the cases of juvenile delinquents in Gary in this study arranged according to offenses committed by groups

²⁰Original tables, pp. 26-29. See Preface to this study.

²¹Original tables, pp. 29-31. See Preface to this study.

and gangs and those committed by children acting alone shows that the Old Immigration furnishes the smallest relative proportion of cases acting in groups or gangs, followed in order by the American, the Colored, and the New Immigration. In the New Immigration almost as many cases were brought to the attention of the court in which more than one child was associated as were brought in singly. Of the total number of cases of all races or nationalities, one-third are associated in groups or gangs. These groups and gangs are not made up of one race or nationality, but rest on a neighborhood or personal basis of organization, rather than racial or national.²²

In some of the cases bad associations aside from groups or gangs is given as a contributing factor in delinquency. One Hungarian child is accustomed to loafing with colored people of a low character; 2 Italian children come from a family with a criminal history in some of its members; one Lithuanian child lives in a very bad neighborhood, one stays in a brother's saloon,²³ and in the case of 2, the neighbors conspire with the parents to evade the law; one Slavish child lives in a neighborhood of boys and girls who are admitted to have a bad influence over the child. Such associations lead to imitative delinquency. All of the 9 cases given here are in New Immigration families.

11. GEOGRAPHICAL DISTRIBUTION²⁴

All of the cases of juvenile delinquents in this study in which information is given are residents of Gary. Residence districts are considered under the headings "North Side", "South Side", "Tolleston", and "Miscellaneous".²⁵ Some residences are given simply as Gary with no street and number specified and in some cases the residence is not given.

An examination of the families of the juvenile delinquents in this study arranged according to residence districts shows that all of the families of the Old Immigration live on the North Side or in Tolleston; all except two of the American families live on the North Side or in Tolleston; all of the colored families except one live on the South Side; and all of the New Immigration families live on the South Side with the exception of one Croatian family who live on the North Side, and one Lithuanian and two

²²Rhoades, p. 125; Everson, p. 126; Breckenridge and Abbott, pp. 128, 129; Hall, p. 217.

²³This was prior to national prohibition.

²⁴Original tables, pp. 31-33. See Preface to this study.

²⁵See map, p. 12.

Polish families who live in Tolleston. That is, in general the American and Old Immigration families live on the North Side, the better residence section of Gary; and in general the Colored and New Immigration families live on the South Side, the poorer residence district.

Of the total number of families, almost two-thirds live on the South Side where the children are exposed to the low influence of the saloon,²⁶ the bowling-alleys and poolrooms, bad sanitation, etc., etc. For example, 13.7 per cent of the cases show the bowling-alleys and poolrooms as loafing-places of the children.

12. CHURCH AFFILIATION²⁷

Five church groups are represented among families of juvenile delinquents in Gary: Roman Catholic, Greek Catholic, Russian Orthodox, Greek Orthodox, and Protestant. This church or religious affiliation must be taken as representing church or religious preference rather than active membership, because information obtained is based on answers to questions asked of members of the families and not verified by the pastor or priest of the church indicated. Often the name of the family does not appear on the membership list of the church indicated at all, and the pastor or priest of the church has no knowledge of such a family.

An examination of the families of delinquents in this study according to church preference, where given, shows 38 Roman Catholic families, 6 Greek Catholic, 2 Russian Orthodox, 1 Greek Orthodox, 18 Protestant, and 9 having no church preference. Of the Protestant churches 3 American families are Presbyterians, 3 Methodists, one Christian, and one English Lutheran; one Colored family is Baptist; 3 German families are Lutheran; one Hungarian family is Protestant Hungarian, and one is Lutheran.

Church preference here is based largely on racial or national lines. The large number of Roman Catholics among juvenile delinquents cannot be taken to indicate that there is more delinquency among such families because of their religious preferences. It merely indicates the large number of families of those races or nationalities where the Roman Catholic faith predominates. And so with the number of Protestant families.

²⁶This was before national prohibition. See Preface.

²⁷Original tables, pp. 33-35. See Preface to this study.

It is significant that a relatively large number of families have no church preference. How large a part the failure of all the churches in Gary to rise to their responsibilities to these people has to play in the matter of the juvenile delinquency in the New Immigration cannot be shown here, but it certainly must have a considerable part in a population of this type so lately cut off from all accustomed ties and associations of the old country.

13. HOME CONDITIONS²⁸

It is not difficult to trace the relationship between juvenile delinquency and certain unfavorable community conditions and practices. It is perhaps following the easy path of least resistance to overemphasize the part played in delinquency by such factors as neighborhood conditions, the failure of the church or the school, the prevalence of moving pictures, dance halls, and pool-rooms, or the wide use of automobiles, because of the apparently obvious relationship between such conditions and practices and specific offenses. Then, too, in looking about for factors in juvenile delinquency, community conditions and practices, being of a public or semi-public nature and as such long considered proper subjects for community investigation and improvement, have readily been seized upon from the point of view of their effect on the moral welfare of children.

While unfavorable community conditions and practices are very important immediate factors in juvenile delinquency, home conditions and practices must be considered as fundamental factors which lay the basis for the child's physical, mental, and moral resistance to such unfavorable community conditions. It is much more difficult to measure the influence of home conditions on juvenile delinquency, because these conditions are not so obvious, they are more complex, they are often apparently remote from the specific act of delinquency, and they are not so well understood.

One of the chief difficulties in measuring the influence of home conditions on juvenile delinquency is the fact that there is no generally accepted uniform set of standards for the exercise of the parental function in the home. Breckenridge and Abbott recognize this fact when they describe the juvenile court as a means of standardizing the parental function.²⁹ From John Fiske's definition of the basis of the family—the coöperation of

²⁸Original tables, pp. 35-54. See Preface to this study.

²⁹Breckenridge and Abbott, p. 13.

both parents for the good of the offspring thru a long period of infancy—may be deduced certain conclusions useful in formulating standards for home care.

For purposes of this study home care affecting juvenile delinquency may be divided into two chief functions, the physical care of children—the provision of material things, food, clothing, and shelter; and what for lack of a better term may be called spiritual care—the provision of training and discipline and guidance of children in their family life. Those homes in which either or both of these functions have broken down may be described as incompetent homes.

14. HOME CONDITIONS—HOUSING

In the materials used in this study information is given in regard to certain economic conditions related to the physical care of the juvenile delinquents included here. Such facts as home ownership, rents, size of house, and the keeping of boarders by affecting the physical well-being of children affect also their moral well-being.

An examination of the families of juvenile delinquents in this study in regard to home ownership shows that no Colored families own or are trying to buy homes, that about 20 per cent of both the Old Immigration and the Americans, and 60 per cent, or over half, of the New Immigration, own or are buying homes.

Home ownership as here given is not an indication, as might be supposed, of high economic station. Many of the homes are not paid for but are being bought on the payment plan. The drain thus made on the income of the family leaves the family oftentimes on the verge of sinking below the poverty line, often makes it necessary for boarders to be kept, for the mother to go out of the house to work, or other sacrifices to be made.³⁰ So that however fine is the desire to own a home, and however worthy the satisfaction of that desire, it cannot be denied that oftentimes the necessary pinching, saving, denial, and loss of privacy in the home are not sufficiently compensated thereby.

The American families pay an average rental of \$25.46 a month, the Colored \$8.50 a month, the Old Immigration \$20.25 a month, and the New Immigration \$9.61 a month. That is, the average amount of rental paid by the American families is a

³⁰Breckenridge and Abbott, p. 81.

little higher than that paid by the Old Immigration and about three times that paid by the Colored and the New Immigration.³¹

The American families average 4.92 rooms to a family, the Colored 2 rooms, the Old Immigration 5.6 rooms, and the New Immigration 3.54 rooms. That is, the American families have more than one room to a family more than the New Immigration and almost 3 rooms to a family more than the Colored. The Old Immigration have almost one room to a family more than the Americans. Yet the average number of persons in the New Immigration families is greater than in any of the other groups, a fact which shows crowded conditions in the homes of the New Immigration to be much worse than in the other racial groups.

The American families pay an average rental per room of \$5.62, the Colored \$4.25, the Old Immigration \$3.68, and the New Immigration \$3.31. An examination of the differences in comforts received in exchange for these rentals makes the difference in amounts of rentals seem far too small.

Many of the families keep boarders. The keeping of boarders in the home affects the child both physically and morally. Outsiders taken into the home not only increase its crowded conditions but destroy its privacy. The keeping of boarders, however, is often an economic necessity, as without this source of income many families could not keep above the dependency level.

Of the 86 families of juvenile delinquents in Gary in 1912 to 1914, 14, or about 16.3 per cent, keep boarders. The practice was confined almost entirely to the New Immigration families. In many cases the juvenile record shows that the "home condition is made worse by the crowd of rough boarders", or "the gang of beer-drinking boarders make conditions very bad."³²

15. HOME CONDITIONS—FAMILY LIFE

In the materials used in this study information is given in regard to certain conditions affecting the spiritual care of the delinquents included here—the provision of training, discipline, and guidance—in the family life of these delinquents. Information is given as to such facts as broken homes, the presence of a stepmother or stepfather in the home, foster parents, physical, mental, or moral incompetency of one or both parents, lack of sympathy or open dissension between the parents, mothers who

³¹Travis, p. 38.

³²Breckenridge and Abbott, p. 118.

work away from home, lack of sympathy between parents and children or open ill-feeling, the number of children in the family among whom the care and attention of the mother must be distributed, special indulgence of children, and hostility between parents and such institutions as the schools and courts.

An examination of the civil condition in these families shows that in 68.1 per cent the parents are living together, in 14.1 per cent one parent is dead, in 3.3 per cent both parents are dead, in 3.5 per cent the parents are separated, in 1.1 per cent the parents are divorced, in 2.3 per cent one parent has deserted, in 3.5 per cent there is a stepmother, in 2.3 per cent there is a stepfather, in 1.1 per cent the parents are foster parents, and in 1.1 per cent there is no information. In these families the Colored show the greatest relative proportion of broken homes, followed in order by the Old Immigration with equal numbers of broken and normal homes, by the Americans with a little more than half as many broken homes as normal homes, and by the New Immigration with less than one-third as many broken as normal homes.

Of the total number, 30.7 per cent are broken homes. That this proportion of broken homes is somewhat lower than in juvenile delinquency studies made elsewhere is due largely to the fact that the figures in this study are based on family and not on case, the broken homes in every instance showing more than one delinquent case.³³

In 50 per cent of the total number of families there is a lack of sympathy between the parents because of some physical, mental, or moral incompetency of one or both parents or an unwillingness to get along together. For example, in 5 families the mother's reputation for morality is bad, in 11 one or both parents are drunken, in 2 the mother is permanently ill, in 2 the mother is insane, and in 10 there is open dissension between the parents. Such facts as are here given are necessarily only the most obvious ones since oftentimes such facts, as dissension between the parents for example, can be learned only after a long acquaintance with the family.

Any great disparity in the ages of parents may account for a lack of sympathy between them. An examination of the ages of the parents in the families in this study where the parents are living together shows that in 26.3 per cent there are from 6 to

³³Breckenridge and Abbott, pp. 91, 92; Morrison (Juvenile Offenders), p. 134; Barnett; Mangold; Everson; Rhoades.

10 years' difference in the ages of the parents, and in 18.4 per cent 11 to 20 years. This difference in ages is much more significant in the industrial class from which so many of the families in this study come, because both mothers and fathers in this class age early from the heavy physical strain under which they live and their deadening mental and moral outlook.

In some of the families the mothers work away from home regularly and cannot give the care to their children essential to their moral well-being. A more searching inquiry would undoubtedly have shown a much greater number of mothers working away from home, if not regularly all day, at least too great a part of the time to give the proper care to their children.³⁴

In this study, in 39.5 per cent of the homes there is some special manifestation of neglect, indifference, cruelty, lack of understanding and sympathy, or inability to control the child on the part of the parents.³⁵ Of the Old Immigration families, 50 per cent show some such unfavorable conditions, 42.3 per cent of the New Immigration, and 40.9 per cent of the American. The following examples are taken from notations appearing on the records of these cases: parents indifferent; the mother mistreats the girl, and tho 17 years old the mother gives her vicious whippings; no sympathy between foster parents and child; the parents do not seem to understand the young girl and will not allow her to have company at home; the parents have no control over the child; parents want the boy sent away seemingly to get rid of him.

The age of the parents at the time of the birth of the child may be an important factor in their sympathy with him. Of the fathers in this study in which information is given as to age, in 20.4 per cent of the cases, the fathers were 36 or more years old at the time of the birth of the child, and the average age of the fathers at the time of the birth of the child is 30.3 years. Of the mothers for whom information is given 25 per cent are from 15 to 20 years of age at the time of the birth of the child. The average age of the mothers at the birth of the child is 24.9 years. Two facts here are significant. First, a fairly large proportion of the fathers are too old to sympathize with and appreciate the spirit of youth in their children; and second, a con-

³⁴Breckenridge and Abbott, pp. 15, 100, 102, 103, 105, 123; Hall, p. 217; Morrison (Juvenile Offenders), pp. 72-116; Travis, pp. 42-44; Mangold; Morrison, p. 149; Everson.

³⁵Breckenridge and Abbott, pp. 45, 105, 106, 123; Travis, pp. 43, 44, 45, 48; Hall, p. 217; Morrison (Juvenile Offenders), pp. 108-110; Mangold, pp. 226-228.

paratively large proportion of the mothers are too young to assume the responsibilities of the necessary home training and discipline of children.³⁶

The age of the parent at the time the case comes to the court is also significant. In this study the greatest number of fathers is in the age group 36 to 40 years and of the mothers 31 to 45 years. The average age of the fathers is 42.1 years and of the mothers 37 years. A comparatively large proportion of the fathers are from 46 to 60 years of age—too old to sympathize with or appreciate the spirit of youth in their children.

The number of children in the family, among whom the care and attention of the mother must be distributed, may have some relationship to juvenile delinquency. In this study the New Immigration shows the greatest average number of children to a family, followed in order by the Old Immigration, the American, and the Colored. Of the families of all races or nationalities, the average number of children is 4.35,³⁷ somewhat higher than the average number of children to a family in the general population of the United States in 1910.³⁸ Any unfavorable relation between the large family and juvenile delinquency because of the mother's inability to give more time and attention to the training of each child may, however, be offset by the disciplinary effect of the necessary give and take between the members of the large family.

Another significant fact is the attitude of the parent to the oldest child, the youngest child, and the only child. In this study, 29.4 per cent of the delinquents are oldest children in the family, 9.8 per cent are youngest children, and 12.7 per cent are only children. The high proportion of oldest born may indicate that at the time of the birth of the child the parents were not mature enough to assume the responsibilities of the necessary home training and discipline. The relatively high proportion of the youngest born and only children is largely due to special indulgence on the part of parents in home training and discipline.³⁹

In this study, in 22.9 per cent of the families there was no willingness on the part of the parents to coöperate with the schools or the courts.⁴⁰ Of the American families, 31.81 per cent show an unfavorable attitude toward the schools or courts

³⁶Breckenridge and Abbott, pp. 123, 124.

³⁷Breckenridge and Abbott, pp. 115, 116; Rhoades.

³⁸U.S. Census Report, 1910, Vol. I, p. 1285.

³⁹Breckenridge and Abbott, p. 117.

⁴⁰Breckenridge and Abbott, p. 15.

and 19.23 per cent of the New Immigration families. The high per cent of the American families in this group is a striking fact. The following examples are taken from notations on the records: parents antagonistic to school and court; parents have no regard for the law; parents will not coöperate with the school; parents shield the boy in his delinquent acts.

Because of the complexity of these unfavorable conditions in the family life of the juvenile delinquents in this study and because of the interrelation of such conditions, accurate measurements cannot be made of various factors. Where two or more unfavorable sets of conditions as listed here exist in the same home, that home is listed as spiritually incompetent.⁴¹ On this basis, 87.2 per cent of the homes represented in this study are spiritually incompetent. Of these the Colored show the highest relative proportions, followed in order by the New Immigration, the Old Immigration, and the Americans.

16. INDUSTRIAL STATUS⁴²

Thirty-one kinds of occupation are given by parents of juvenile delinquents in Gary in 1912-1914. These occupations are here classified in three groups. The first and lowest, group I, is that characterized by low paid and irregular work, including chambermaid work, keeping roomers and boarders, cooking, washing, cleaning, and sewing. The families in this group are chiefly those in which the mother is the bread-winner. The second, group II, includes the common laborers and workers paid on the same scale as common laborers—that is, those making from 17½ cents up to 24 cents an hour, or from \$1.50 to \$2.50 a day. Besides common laborers, this group includes bartenders, janitors, etc., receiving the wage of common labor. The third, group III, includes skilled laborers, clerks, one agent for brewing company; and one hotel-keeper.

In group I, the lowest group, the Colored families show the highest relative proportions, followed in order by the New Immigration and Americans—the Old Immigration showing no cases. In group II, the New Immigration shows the highest proportional numbers, followed in order by the Colored, the Old Immigration, and the Americans. In group III, the highest group, the Americans show the highest relative proportions followed in order by

⁴¹Mangold, p. 225; Breckenridge and Abbott, p. 13; Travis, p. 48, a xxvi; Morrison (Juvenile Offenders), p. 119.

⁴²Original tables, pp. 35-37. See Preface to this study. See also Appendix, Table III.

the Old Immigration and the New Immigration; the Colored show no cases. That is, in this study the Colored and the New Immigration families are lower in the industrial scale than the American and Old Immigration. Of the total numbers of families of all races and nationalities, the highest proportion, almost half, are in group II, followed by those in group III, with the smallest number in group I.

IV. Certain Associations of Adult Crime

SECTION I

A. General Considerations

SECTION I of this study of adult crime in Gary consists of 3,031 cases of persons arrested by the police to be brought before the city court during a period of twelve months from January 1, 1914, to December 31, 1914, inclusive. In this number, 47 single race or nationality units are represented.¹

1. PROPORTION BY RACE OR NATIONALITY²

An examination of these cases arranged according to single race or nationality units shows that the Americans furnish the highest proportions of the total number, followed in order by the Colored and the Poles. Arranged according to race or nationality groups, the New Immigration shows the highest proportions, followed in order by the Americans, the Old Immigration, and the Colored.

In order, however, to determine the true relation of any race or nationality to crime, the proportion which that race or nationality furnishes to crime should be compared with the proportion which that race or nationality furnishes to the general population in the corresponding ages.³

From the figures at hand it appears that in general the Americans and Old Immigration bear less than their proportional share and the Colored and New Immigration more than their proportional share of adult offenders in this study.

2. KINDS OF OFFENSES⁴

In a study of adult crime, kind of offense is a much more important fact than in juvenile delinquency because in crime the act committed indicates more clearly the character of the individual, and also because the act committed is still used as the basis of treatment of the individual.

¹See p. 42, this study.

²Original tables, pp. 58-61. See Preface to this study. See also Appendix, Table IV.

³Koren, pp. 28, 40, 41.

⁴Original tables, pp. 61-74. See Preface to this study. See also Appendix, Table V.

The prevalence of certain kinds of offenses as shown in the police records of a community depends largely upon the manner of dealing with such offenses in that community. The fact that there appears in the police records a very great many cases of assault and battery, drunkenness, vagrancy, larceny, gambling, prostitution, running houses of ill fame, frequenting houses of ill fame, and adultery may not mean that these offenses are more prevalent in that community than in any other, but may be due to the special activity of the police in arresting such offenders, and to the severity of the courts in dealing with them.

In this study of crime in Gary, such offenses as drunkenness, vagrancy, disorderly conduct, etc., are considered crimes according to the definition of crime as used in this study—that is, offenses which the law so recognizes and punishes.⁵

The general classification of offenses used in this study is a modification of that of the Special Report of the United States Census of 1904 on Prisoners and Juvenile Delinquents, prepared by John Koren.⁶ Offenses are classified under five chief headings: offenses against the person; offenses against property; offenses against society, including offenses against chastity and morality and offenses against public policy; miscellaneous offenses; and offenses not specified.

In this study under the first heading, offenses against the person, are included the following: accessory in homicide, homicide, assault, robbery, rape, and attempted rape. Under the heading, offenses against property, are included the following: burglary, larceny, forgery, fraud, embezzlement, malicious mischief and malicious trespass, and malicious destruction of property. Offenses against society are divided into two subdivisions. Under the subdivision, offenses against chastity and morality, are included the following: adultery, bigamy, crime against nature, fornication, running houses of ill fame, prostitution, public indecency, and profanity. Under the subdivision, offenses against public policy, are included the following: counterfeiting, violating United States laws, drunkenness, disorderly conduct, violating liquor laws, vagrancy, violating local ordinances, operating gambling-houses, gambling, violating pure food laws, violating fish and game laws, riot, cruelty to animals, provoke, and such other offenses as soliciting business in court, jumping bond, fugitive from justice, interfering with officer, contributing to

⁵Quinton, p. 94; Boies, pp. 88, 89.

⁶Koren, p. 19.

delinquency, breaking peace bond, contempt of court, arrest on bench warrant, assisting prisoner to escape. Under the heading, miscellaneous, are included the following: cruelty to children, abandonment or non-support of wife, of wife and children, and bastardy. The heading, offenses not stated, explains itself.

This classification differs from that in the census in that no separate heading is made of "double crimes", and that the subdivision "offenses against chastity" is made to include offenses against chastity *and* morality. Some offenses are included under headings in this study which are not so classified in the census report; for example "provoke" is included under the heading "offenses against public policy". These changes are made because of the difference in basis of figures in this study, which refer to arrests, and that of the figures in the census report which refer to commitments; also because certain offenses in the census reports are not specifically classified on account of the small numbers in such classes.

The difficulty of reducing offenses to this classification and the inexactness of such a classification are apparent.⁷ The inexactness, however, lies in comparatively few offenses of comparatively few numbers, and, moreover, the advantage of such a proceeding lies in its simplicity for the purpose of the comparison of general principles. For the three great classes of crimes are universal: those against the person, those against property, and those against society.

An examination of the cases represented in this study arranged according to race or nationality group and four principal classes of kinds of offenses shows that in absolute numbers, in offenses against the person, the New Immigration leads, followed in order by the Americans, the Old Immigration, and the Colored with almost equal numbers, the Asiatics and other Americans showing negligible numbers. In offenses against property the New Immigration leads, followed in order by the Colored, the Old Immigration, and the Americans. In offenses against chastity and morality the New Immigration leads, followed closely in order by the Colored, the Americans and the Old Immigration showing fewer numbers. In offenses against public policy the New Immigration leads, followed in order by the Americans, the Old Immigration, and the Colored.

To determine the true relation, however, between race or nationality and kind of offense, the proportion which each race

⁷Quinton, p. 94; Boies, pp. 88, 89.

or nationality group furnishes to the main classes of kinds of offense must be compared with the proportion which that race or nationality group furnishes to the total amount of crime. On this basis, an examination of the cases in this study shows that the Americans furnish less than their fair share of offenses against the person and against property, and more than their fair share of offenses against chastity and morality and against public policy. The Colored bear less than their fair share of offenses against the person, slightly less against public policy, about their fair share against property, and much more than their share against chastity and morality. The Old Immigration resembles the Americans in bearing less than its fair share of offenses against the person and against property, and more against chastity and morality and against public policy. The New Immigration bears more than its share of offenses against the person and against property, but less against chastity and morality and against public policy.⁸ That is, in offenses against society the American and Old Immigration lead, and in offenses against the person and against property the New Immigration leads.

A study of these cases arranged according to specific kinds of offense and single race or nationality unit is extremely interesting. Only in the following specific kinds of offenses were there sufficient numbers and sufficient definiteness in the charge for profitable comparison: assault and battery, drunkenness, vagrancy, larceny, gambling, prostitution, running house of ill fame, adultery, associating, and fornication.

In assault and battery cases the Servians show the highest relative proportions, followed in order by the Greeks, Russians, Roumanians, Slavs, Lithuanians, Austrians, Poles, Croatians, Macedonians, Hungarians, Italians, Bohemians, English, Germans, Horoats, Colored, Jews, Americans, Irish, and Scotch.

In the cases of drunkenness the Swedes show the highest proportional numbers, followed in order by Scotch, Irish, Americans, English, Slavish, Russians, Lithuanians, Hungarians, Polish, German, Horoats, Austrians, Croatians, French, Greek, Servians, Roumanians, Italians, and Colored.

In the cases of vagrancy the Austrians show the highest proportional numbers, followed in order by the French, Croatians, Scotch, Irish, Americans, English, Germans, Jews, Colored, Greeks, Hungarians, Polish, Swedes, Russians, Italians, Lithuanians, and Servians.

⁸Morrison (Crime and Its Causes), pp. 38, 39; Lombroso (Crime, Its Causes and Remedies), pp. 23, 26, 30, 33, 35, 38; Aschaeffenburg, p. 32.

In the cases of larceny the Macedonians show the highest proportional numbers, followed in order by the Roumanians, Lithuanians, Austrians, Poles, Colored, Greeks, Hungarians, Russians, Servians, Slavs, Italians, Germans, Horoats, Jews, English, French, Bohemians, Americans, Scotch, Irish, and Swedish.

In the cases of gambling the Colored shows the greatest proportional number, followed in order by the Jews, Servians, Austrians, Poles, Hungarians, Russians, Americans, Slavs, and Irish.

In the cases of prostitution the French show the greatest proportional numbers, followed in order by the Germans, Colored, Jews, Italians, Bohemians, Americans, Horoats, English, Irish, Hungarians, Russians, Servians, Austrians, Polish, and Roumanians.

In the cases of running houses of ill fame, the Bohemians show the highest proportional numbers, followed in order by the Jews, English, Irish, Colored, Germans, Greeks, Hungarians, Americans, Russians, and Poles.

In cases of adultery, the Horoats show the highest proportional number, followed in order by the Roumanians, Italians, Colored, Americans, Servians, Croatians and Jews the same, Greeks, Austrians, Germans, and Macedonians.

In the cases of associating or frequenting houses of ill fame, the Greeks show the highest proportional numbers, followed in order by Colored, Americans, Roumanians, Lithuanians, Poles, Germans, Hungarians, Slavs, Servians, Austrians, Italians, Russians, and Irish.

An examination of these cases arranged according to race or nationality group shows that in assault and battery cases the New Immigration shows the highest proportional numbers, followed in order by the Colored, Old Immigration, and Americans. In drunkenness the Old Immigration shows the highest proportional numbers followed in order by Americans, New Immigration, and Colored. In cases of vagrancy the Americans show the highest proportional numbers, followed in order by the Old Immigration, the Colored, and the New Immigration. In the larceny cases the New Immigration shows the highest proportional numbers, followed in order by the Colored, Old Immigration, and Americans. In cases of gambling the Colored show by far the highest proportional numbers followed in order by the New Immigration, the Americans, and the Old Immigration.

In prostitution the Colored show the highest proportional numbers, followed in order by the Old Immigration and Americans, the New Immigration showing comparatively few cases. In running houses of ill fame the Colored again show the highest proportional numbers, followed in order by the Old Immigration, the American, and the New Immigration. In adultery the Colored show the highest proportional numbers, followed in order by the Americans, the New Immigration, and the Old Immigration. In associating or frequenting houses of ill fame the Colored show the highest proportional numbers, followed in order by the Americans, New Immigration, and Old Immigration.

It is significant that in the two specific kinds of offenses, assault and battery and drunkenness, the ranking of the racial or national groups is reversed. In assault and battery the New Immigration and Colored show the highest proportional numbers, while in drunkenness these two groups show the fewest proportional numbers. Evidently here the relation between assault and battery and drunkenness is not very close.

Of all the offenses represented in this study, drunkenness shows the highest proportional numbers, followed by assault and battery, larceny, prostitution, gambling, vagrancy, associating, adultery, and running houses of ill fame. It must be remembered that this ranking is for cases arrested, and may not be the true ranking of these offenses in the community. This possible discrepancy is due to the fact that certain offenses are more easily detected than others—such as gambling, for example—and also to the fact that the public regards certain offenses as much more serious than others and demands action in such—as assault and battery for example—while almost disregarding certain other offenses—as gambling for example.⁹

An examination of the ranking of the four classes of offenses, those against the person, those against property, those against chastity and morality, and those against public policy, in this study, in studies in Indiana, and in the United States, shows a wide variation not only in different parts of the country, but for the same parts of the country at the same time. For example, in the United States in June, 1904, offenses against property ranked highest, while for the whole year 1904 offenses against public policy ranked highest.¹⁰ These differences are due to

⁹Boies, p. 198; Quinton, p. 109; McKinn, p. 150; Koren, pp. 21-23.

¹⁰Koren, p. 20; Boies, pp. 33, 34 quoting 11th Census of the United States, Compendium, Part II, p. 192.

differences in dealing with certain kinds of offenses,¹ differences in basis of the groups, differences in laws and in crime classifications in different parts of the country.

3. DISPOSITION OF CASES¹¹

The terminology used in this section on disposition of cases in this study is that used in the arrest sheets. Cases are classified under four general headings: first, those showing sentences imposed; second, those showing no sentences imposed; third, cases incompleated; and fourth, those in which the disposition of the case is not given.

Under the first heading, sentences imposed, are included those cases in which fines were paid, fines stayed, jail sentence imposed on failure to pay fine, and fine and jail sentence imposed. Under the second heading, no sentence imposed, are included cases released by the police, nolle prossed, discharged by the judge, and dismissed. Under the third heading, case incompleated, are included cases pending, continued (which includes cases released on own recognizance, released on bond, and bond defaulted), cases turned over to the circuit and superior courts, released to other officers (officers of other cities, constables, marshalls, sheriffs, federal authorities, immigration inspector, and officers of Monon Railway), and miscellaneous (appealed, suspended sentence, new trial).

An examination of the cases in this study arranged according to the relative proportions of each race or nationality group having sentences imposed shows that the Americans have the smallest relative proportions with a sentence imposed followed in order by the Old Immigration, the Colored, and the New Immigration. That is, in their chance of being sentenced after having been arrested, the American and Old Immigration offenders stand in a more favorable relation before the officers and the courts than the Colored and the New Immigration offenders.

That this fact cannot be explained by the possibility that the American and Old Immigration show a smaller relative proportion of those offenses in which conviction is most likely, is shown by an examination of the relation between offenses and disposition. This examination shows that while the New Immigration and Colored show higher per cents of their totals receiving sentences than the Americans, they also show smaller percentages

¹¹Original tables, pp. 74-86. See Preface to this study.

in all those classes of offenses showing the greatest percentage of convictions, except in drunkenness, when the Americans and Old Immigration show the highest per cent.

Only 43.9 per cent of all the cases arrested (in which disposition of case is given) for all offenses have a sentence imposed. This relatively small proportion of cases with sentences imposed is due to a number of reasons among which may be mentioned the following: humanitarian considerations on the part of the police, prosecutor, and judge; to confused or insufficient evidence for conviction; to a lack of seriousness of some of the offenses; to the leniency of police, prosecutor, and judge in the case of females; to the attitude of officers of the law toward certain offenses; to the lack of a uniform intelligent policy of treatment of certain kinds of offenses by the state; and to an honest difference of opinion regarding the treatment of certain kinds of offenses.

In an examination of the relation between imposition of sentences and offenses only certain kinds of specific offenses in this study show sufficient numbers and sufficient definiteness in the charge to be of value. Of these the cases of drunkenness show the highest relative proportions receiving sentences followed in order by adultery, larceny, gambling, assault and battery, associating, vagrancy, prostitution, and running houses of ill fame.

Of the cases in which sentences were imposed, some paid fines, some had their fines stayed, some were sentenced to jail on failure to pay fines assessed, and some were both fined and sentenced to jail.

An examination of the cases arranged according to race or nationality group and type of sentence imposed shows that in the payment of fines the New Immigration furnishes by far the highest proportional numbers, followed in order by the Old Immigration, the American, and the Colored. In cases of fines stayed the Colored show by far the highest proportional numbers, followed in order by the New Immigration, the Old Immigration, and the Americans. In those cases sentenced to jail on failure to pay fines assessed the Americans show by far the highest proportions, followed in order by the Colored, the New Immigration, and the Old Immigration. In cases having both jail sentences and fines imposed the Colored show the highest proportions, followed in order by the New Immigration, the Old Immigration, and the Americans.

By combining those cases who paid fines and those who were sentenced to jail on failure to pay fines (in which latter case the court had no way to determine whether the fine would be paid or not) the wide differences between race or nationality group tend to smooth out. The relatively high proportion of the New Immigration paying fines means little more than that offenders in this group prefer to, and manage to pay their fines rather than to "lay them out" in jail, and no one race or nationality group stands in a more unfavorable relation to the court in the matter of payment of fines than any other group.

In this study a much smaller proportion of females received sentences than of males. Of the total number of cases of all races or nationalities, 31.46 per cent of the females have sentences imposed while 43.93 per cent of the males received sentences. This difference is due largely to the special leniency of officers and courts in dealing with women offenders, and probably also to differences in opinion as to dealing with the chief kind of offense committed by the majority of women in this study—prostitution.

An examination of the cases of women in this study arranged according to race or nationality groups and sentences imposed shows that the Colored receive the most severe sentences.

B. Individual Considerations

4. AGE¹²

The age groups used in this study of adult crime are those used by John Koren in the Special Report of the United States Census on Prisoners and Juvenile Delinquents in 1904. These groups are 16 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 59, 60 to 69, and 70 years and over.

An examination of the cases in this study arranged according to age groups and single race or nationality unit shows that with the exception of the English, Scotch, Slavs, and Swedes, each race or nationality has the greatest number of offenders in the age groups 20 to 24 years and 25 to 29 years, that is, in general, in the years 20 to 30.

Arranged according to race or nationality group and ages, the Americans show the greatest number of cases 20 to 30 years of age with a large proportion 30 to 34 years of age. The Colored show the greatest number of cases 20 to 30 years of age with a

¹²Original tables, pp. 86-91. See Preface to this study.

large proportion 30 to 40 years of age. The Old Immigration shows the greatest number 20 to 30 years of age with large numbers on to the forty-fifth year. The New Immigration shows the greatest number of cases 20 to 30 years of age with quite a rapid decline in numbers after the thirty-fourth year.

This variation in the New Immigration cases—the preponderance of cases in the age group 20 to 30 years, and the very rapid decline in numbers after the thirty-fourth year—is without doubt due to the fact that by far the greatest number of persons of the New Immigration in the general population of the country belong to the age group 16 to 45, the years of the greatest amount of crime. This result is consistent with figures for the United States as a whole where in both major and minor offenses the native whites are older than the foreign born, a fact explained by the age of arrival of the foreign born in this country.¹³

Of the total number of cases of all races or nationalities there is a gradual increase in numbers from the age of 16 up to the highest numbers in the age group 25 to 29 years after which there is a gradual decline to the age of 70 and over. In the United States as a whole the crest of the curve is reached in the years 20 to 24.

A comparison of the age groups of greatest numbers of offenders in this study with those in studies by Ferrero, Lombroso, and Morrison, and in studies in Austria, France, and England shows that the Gary figures are about midway between the extremes given in other studies.¹⁴

An examination of these cases arranged according to age groups and sex shows the greatest number of female offenders in the group 16 to 19 years, with almost an equal number 20 to 24 years, and a gradual decrease thru the remaining age groups to the age of 44 years, when the decrease is very rapid. This result is consistent with the conclusion reached by De Quiros that after the age of 46 years females show less criminality.¹⁵ In the Gary study the women are in general younger than the men.

5. SEX¹⁶

In this part of the study of crime in Gary, of the total number of offenders, 2,682 are males and 349 females.

¹³Koren, pp. 49, 51.

¹⁴Ferrero, p. 151; Lombroso (*Crime, Its Causes and Remedies*), pp. 175, 176; Morrison (*Crime and Its Causes*), pp. 160, 161.

¹⁵De Quiros.

¹⁶Original tables, pp. 91-96. See Preface to this study.

Arranged according to single race or nationality unit and sex, the single race or nationality units show a wide variation in the proportion of the sexes. The Greeks, for example, show 76 men and no women offenders, while the Colored and German show almost half as many women as men.

In this study 22 single race or nationality units show females. Of these the Spanish show the highest proportions followed in order by the Germans, Colored, French, English, Jewish, Bohemians, Italians, Horoats, Servians, Americans, Hungarians, Roumanians, Irish, Croatians, Poles, Russians, Austrians, Slavish, Lithuanians, Norwegians, and Swedes.

These cases arranged according to race or nationality groups show the Colored with much the highest relative proportion of females, followed in order by the Old Immigration and the Americans, the New Immigration showing a relatively small proportion of females. This relatively small proportion of female offenders in the New Immigration may be partly but not entirely explained by the variation in proportions of males and females of this race or nationality group in the United States. The Census Report of 1910 shows that, while in the general population the proportion of the sexes in the other groups is nearly the same, in the foreign born white population the per cent of females is only 43.6 per cent.

A comparison of the proportions of sexes of offenders in this study and those of studies by Drähms for the United States, by Lombroso for Italy, by Ferrero for Austria, Spain, and Italy shows a considerable variation for the different countries and for different parts of the same country.¹⁷ In all these studies the proportion of females seldom rises above 20 per cent or falls below 6 per cent. In this study the proportion of females is 11.5 per cent.

6. CIVIL CONDITION¹⁸

In the material for this study of crime, information as to civil condition of offenders is given only as married or unmarried. There is no information as to those widowed, separated, or divorced among whom criminality is in general high.¹⁹ However, since widowed, separated, and divorced offenders usually answer

¹⁷Drähms, p. 217; Koren, p. 16; Lombroso (*Crime and Its Causes*), pp. 181, 182, 191; Ferrero, p. 151. Aschaeffenburg, pp. 160, 161; De Quiros, p. 113; Lydston, p. 143; Morrison (*Crime and Its Causes*, p. 152; Kellor, p. 158.

¹⁸Original tables, pp. 96-102. See Preface to this study.

¹⁹Aschaeffenburg, p. 167.

in the negative when asked if married, these classes may with little chance of error be assumed to be included in the list of unmarried, and those answering in the affirmative may with little chance of error be assumed to have some sort of family life.²⁰

An examination of the cases in this study arranged according to single race or nationality units and civil condition shows that in most of the single race or nationality units of the New Immigration the per cent of those married is in general higher than among other race or nationality units. There is an important exception to this in the case of the Greeks and Italians. This may be explained partly at least by the fact that more unmarried men in the general population of those race or nationality units come to the United States.²¹ Among the race or nationality units belonging to the Old Immigration, the proportion of married offenders is in general lower than in other race or nationality units.

Comparing the proportion of married offenders in this study by race or nationality group with the proportion of married persons in the general population of the United States in 1910 by the roughly corresponding color and nativity group, the criminal population in this study shows a much smaller proportion of persons married in every group.

Of the total number of cases of all races or nationality groups in this study, 41.8 per cent are married, while in the general population of the United States in 1910, 57.3 per cent are married.

An examination of the women offenders of this study shows that the proportion of married women (37.4 per cent) is considerably less than the proportion of married women (58.9 per cent) in the general population of the United States in 1910.

The proportion of married women in this study is considerably less than the proportion of married men.

This conclusion as to the small proportion of married persons in this study is consistent with conclusions reached by investigators of crime both in this country and abroad.²²

7. ILLITERACY²³

In this study the only information given in the materials as to amount of education is that of ability to read and write, a

²⁰Lydston, p. 139; Census, 1910, Vol. I, Population, p. 507.

²¹Fairchild (Greek Immigration). See also immigration statistics.

²²Koren, p. 55; Aschaeffenburg, pp. 162, 166, 167; Lombroso (Crime, Its Causes and Remedies), p. 192; Lydston, p. 138; De Quiros, p. 114.

²³Original tables, pp. 102-107. See Preface to this study.

fact which is here taken to represent literacy.²⁴ Altho literacy is no measure of amount of education, illiteracy may be taken as an indication of lack of school training.

An examination of the cases in this study arranged according to illiterates and single race or nationality units shows that the race or nationality units vary widely in proportions of illiterates.

In the case of certain race or nationality units it is possible to secure figures for illiteracy in their native country. Of those race or nationality units showing both sufficient numbers for comparison and figures for illiteracy in their native countries, the Austrians, Greeks, Italians, and Russians in the criminal population of Gary show a higher per cent of illiteracy than is found in the general population of their respective countries; the Irish and Servians a lower per cent; and the Roumanians almost the same per cent.

An examination of these cases arranged according to race or nationality groups and illiteracy shows the New Immigration with by far the greatest relative proportion of illiterates followed in order by the Colored, the Old Immigration, and the Americans.

Comparing the proportion of illiterates in these race or nationality groups in this study to the proportion of illiterates in the roughly corresponding groups in the general population of the United States ten years of age and over in 1910, the Old Immigration and New Immigration in this study show a higher proportion of illiterates while the Americans and the Colored show a lower proportion.

Of all the cases of all races or nationalities in this study, 35.7 per cent are illiterate. The proportion of illiterates in the general population of the United States 10 years of age and over in 1910 was 7.7 per cent.

The per cent of illiterates among the women offenders in this study is 21.7 per cent, less than that for both sexes (35.7 per cent) and greater than that for women in the general population of the United States 10 years of age and over in 1910 (7.8 per cent).

The figures given here are consistent with results obtained by investigators of crime in other parts of this country and abroad.²⁵

It is difficult to trace a causal relationship between lack of education and crime.²⁶ Many factors enter into the matter of

²⁴See Census, 1910, Vol. I, Population, for use of word "illiteracy".

²⁵Koren, pp. 56, 57; Bennet, p. 14; Symposium, Physical Bases of Crime, p. 63; Drähms, p. 189.

²⁶Lombroso (*Crime, Its Causes and Remedies*), pp. 111, 108; Boies, p. 47; Aschaeffenburg, pp. 136-138.

illiteracy which indicate that the chief fact so far as crime is concerned is not illiteracy itself, but other facts lying back of illiteracy.

8. HEIGHT AND WEIGHT²⁷

In the materials for this study the only information given as to physical measurements is that of height and weight of offenders. A careful examination was made of the heights and weights of the cases given here.

In considering height, the cases of the males 21 years of age and over were arranged according to race and nationality units and inches in height. A comparison was made of the average height for each race or nationality unit represented in this study to measurements for the same race or nationality unit as given by the anthropologists, Deniker, Topinard, Haddon, and Keane. A comparison was made of the average height of all the cases of all races or nationalities in this study to the average height of man as given by Deniker, Topinard, Haddon, Keane, and De Quatrefages. A comparison was made of the average height of males under 21 years of age with the average height of man as given by Deniker and Topinard. The cases of females 21 years of age and over were arranged according to race and nationality units and inches in height. The average heights of these race or nationality units was compared to the average heights of the corresponding races or nationalities as given by Deniker, Keane, Haddon, and Topinard.²⁸

Weight varies normally according to height and age. In considering weight, the cases in this study, the cases of males 21 years of age or over, were arranged according to the average weight in pounds for all heights of males for each race or nationality unit, and also according to the average weight in pounds for age and height classes and single race or nationality unit. The average weights according to height and age of race or nationality units was compared to the corresponding height and age classes as given in a table of 74,162 accepted applicants for life insurance reported to the Association of Life Insurance Medical Directors. These average weights were also compared to average weights for certain race or nationality units regardless of age and height

²⁷Original tables, pp. 107-125. See Preface to this study.

²⁸Topinard (*Anthropologie Generale*), pp. 427-443; (*L'anthropologie*), pp. 353-358; (*Anthropology*), p. 320; Deniker, pp. 30, 577-584; Haddon (*The Races of Man*), pp. 3, 18, 43, 44, 45, 46; Keane (*Ethnology*), pp. 188, 189; De Quatrefages, pp. 353, 354.

as reported by Topinard. Cases of males under 21 years of age in this study were arranged according to average weights of single race or nationality units by age and these were compared with the average weights of the cases in this study over 21 years of age. Cases of females 21 years of age and over in this study were arranged according to weight, height, and single race or nationality units and compared with average weights and heights of women as given in a table in the *World's Almanac and Encyclopedia* for 1916.²⁹

In the cases of women in this study, there are three prostitutes weighing 400 pounds each. Lombroso calls attention to abnormality in the weights of prostitutes.³⁰

No inferiority in height and weight was found in the cases in this study, but in many cases, especially in the New Immigration, an actual superiority to heights and weights in general population as computed by anthropologists. This fact is in general contrary to conclusions of most criminologists.³¹ This difference is, due, without doubt, not to the fact that the Gary criminal population as such shows anything peculiar in this connection, but to the fact that the general population of Gary is a selected population. Because of the newness of the city of Gary it has attracted to it the pioneer type of people, that is, the most vigorous and enterprising persons from rural communities and other cities and towns in this country. Especially is this true of the New Immigration where a double process of selection has been at work: first, in the old country where only the more vigorous and enterprising types in the community emigrate, and, second, in the cities and towns of this country where only the more vigorous and enterprising remove to other towns and cities. Another factor in the superiority of height and weight of the New Immigration population of Gary is that of their peasant origin where the stock is generally sturdy.³²

Another factor that may enter here in explaining the difference in conclusion reached here as to height and weight of cases in this study and that in other studies of crime is the fact that these are cases of petty crime only, while other studies referred to include cases of much more serious crimes.

²⁹Topinard (*L'Anthropologie*), p. 423; Deniker, p. 577; Topinard (*Anthropology*), p. 398, *World's Almanac and Encyclopedia*, 1916, p. 83.

³⁰Lombroso and Ferrero (*The Female Offender*), pp. 50-113.

³¹Aschaeffenburg, p. 168; Symposium, *Physical Bases of Crime*, Rock Sleyster, M.D., p. 116; Z. R. Brockway, p. 135; Boies, p. 24; De Quiros, p. 116; Kellor, p. 44; Healey, p. 242; Ferrero and Lombroso, pp. 47, 48; Macdonald, p. 38.

³²Topinard (*Anthropology*), p. 398, (*Anthropologie Generale*), p. 448; Ripley, p. 80; Keane (*Ethnology*), p. 187; De Quarefages, p. 353.

C. Cosmic Considerations

9. SEASONAL CRIME³³

The only cosmic consideration for which practicable information can be had for this study is seasonal crime. An examination of the cases arranged according to months of the year and offenses shows that the greatest number of cases of all races or nationalities and of both sexes are in the spring months followed in order by summer, autumn, and winter. This conclusion that the greatest number of offenses are in the warm months and the fewest in the cold months is consistent with the results of investigations of crime elsewhere.³⁴

D. Social Considerations

10. BIRTHPLACE³⁵

Since Gary was incorporated only in 1906 it is clear that its population over 8 years of age must have been born elsewhere.³⁶

Arranging the cases according to birthplace in the United States and abroad by race or nationality groups, as would be supposed, the Americans and Colored show very small proportions born abroad, the Americans 1.41 per cent and the Colored 0.03 per cent. Of the Old and New Immigration, the Old Immigration shows 30.6 per cent born abroad and the New Immigration 65.3 per cent.

Arranging these cases according to sex, a significant fact is the unusually high proportion of females of the Old Immigration born in the United States as compared to the males in the same race or nationality group.

Of the total number of cases in this study the per cent of those born in the United States is about half that of those born abroad. This unusually high proportion of foreign born offenders in Gary is due partly to the high proportion of foreign born in the general population of Gary, and partly to the fact that cases in this study are those of minor offenses in which the proportion of foreign born is in general high.³⁷

Of the foreign born, in some cases the information is given as to specific country or province of birth, in others merely "the

³³Original tables, pp. 126-130. See Preface to this study.

³⁴Leffingwell, p. 132; Lombroso (*Crime, Its Causes and Remedies*), p. 2; Morri-son (*Crime and Its Causes*), pp. 61, 66, 68.

³⁵Original tables, pp. 131-141. See Preface to this study.

³⁶This study is based on material gathered in 1914.

³⁷Healey, p. 150; Boies, p. 68; Koren, pp. 18-40.

old country" is given as birthplace. Altho in some cases it is clear to what country this phrase refers—as, for example, the Belgians who are born in the "old country" are without doubt born in Belgium—in many cases it is not clear, as, for instance, in the case of the Jews, where the phrase has a bit of pathos in it. Almost every country and province in Europe is represented in birthplaces of these cases.

Of the cases born in the United States where information is given as to specific place of birth, 38 states and the District of Columbia are represented. Of the total number, only 2 are given as being born in territory now included in the city of Gary, 20 are born in the nearby towns in the county, 88 are born in Chicago, and 57 in Indiana. Of the adjoining states, Illinois (with the exception of Chicago) furnished 48, Kentucky 45, Ohio 41, and Michigan 22. Higher than these, however, ranks Pennsylvania, with 91.

An examination of these cases according to geographical divisions as used in the United States census shows that the greatest number of cases born in the United States come from the eastern north central states, the region closest geographically to Gary; the second greatest number in the middle Atlantic states. This second group has followed two influences: the general westward movement of population in the United States, and the movement to Gary of industrial populations from the older industrial states, especially the iron and steel making states.

Of the Colored, the great majority have come from the old slave states and those southern states showing large colored populations. These cases have followed the general northward movement of the colored population of the country.

Without doubt much of the petty crime in Gary is due to the confusion caused by lack of uniformity of moral standards and ignorance of legal regulations among the various racial and national groups making up its population. Even that part of the population born in the United States is recruited from many communities in many parts of the country, each differing somewhat from the other in morals, customs, and laws. The only unifying element in the American born population is the fact that much of it has been accustomed to an industrial community such as Gary is.

But if confusion results among the native born population because of the various parts of the country from which it has been

drawn, what must be the situation in the case of the foreign born who are recruited from almost every country and province in Europe and many countries of America and Asia? Many of the foreign born, however, have not come directly to Gary on coming to this country, but have moved from some other industrial city in the United States to Gary and so are somewhat accustomed to an industrial community.

11. ASSOCIATION IN CRIME³⁸

There are certain criminal acts which by their nature involve more than one person, and certain others that may or may not be engaged in by more than one person. Such are assault and battery where two persons are necessarily involved, tho one may or may not be passive; and highway robbery where several persons may join in the same criminal act.

In this study, information is not available in all types of offenses to show whether one or more persons are involved. Some of the cases of assault and battery, larceny, gambling, malicious destruction of property and malicious trespass, prostitution, adultery, riot, and highway robbery give information which is quite significant in the determination of the relation between race or nationality and association in crime.

In assault and battery about twice as many cases are between individuals of the same race or nationality—as, for example, Pole against Pole—as between individuals of different race or nationality units, as, for example, Russian against German. That is, the persons of the same race or nationality units fight among themselves about twice as often as with persons of other race or nationality units. These figures do not indicate that the contact of many races or nationalities in Gary increases race antagonism.

Trouble between individuals of different races or nationalities does not apparently follow the lines of old race prejudices in Europe, about as many cases being shown in which the participants belong to races or nationalities between which there is no sharp antagonism in the countries of origin—as, for example, Pole against Slav, or Greek against Colored—as belong to races or nationalities between which there are many causes of bitterness in the country of origin—as, for example, Russian against Pole, or Austrian against Servian.

In larceny where more than one person is involved, the case is somewhat different. Two or more individuals are here

³⁸Original tables, pp. 145-150. See Preface to this study.

coöperating to commit the same act. In this study almost equal numbers of larceny cases show individuals of the same race or nationality and individuals of different race or nationality engaged in the same offense. Where two or more race or nationality units are represented in the same act, they are not such as are especially bound together by ties of friendship in their countries of origin, as, for example, Austrian, Servian, Croatian.

In cases of gambling or operating a gambling-house, there is opportunity for a great many persons to be involved. In these offenses, equal numbers of cases are shown in which individuals belong to the same race or nationality, and to different races or nationalities. In cases where more than one race or nationality is represented, the individuals in some instances belong to races or nationalities where there is no special antagonism in the countries of origin, and in some instances to races or nationalities where there are many causes of bitterness in the countries of origin.

In the offenses of malicious destruction of property and malicious trespass, information as to complicity is given in 4 cases. In each of these cases the persons involved belong to the same race or nationality. In these cases the offense is oftentimes committed by members of the same household group (as, for example, trespassing on the railroad to get coal) where usually the persons belong to the same race or nationality whether because of ties of blood or because of friendship.

In all of the cases of riot except one the persons involved belong to the same race or nationality. The one case where they do not belong to the same race or nationality shows that likeness of race or nationality is not an essential factor in this offense.

In highway robbery, equal numbers of cases show individuals belonging to the same race or nationality and to different races or nationalities, and when members belong to different races or nationalities, the races or nationalities represented are not such as are closely bound together in the countries of origin.

In adultery, almost half the cases show individuals of different races or nationalities, and in those cases between men and women of different races or nationalities the races or nationalities represented are in some instances those in which there are special antagonisms in the countries of origin and sometimes not.

In the cases of prostitution, an almost equal number of cases show individuals belonging to the same race or nationality and to different races or nationalities. The women in the same house at

the same time and the men visiting the same house at the same time in some instances belong to the same race or nationality and in some instances not. Men of one race or nationality in some instances visit women of the same race or nationality and in some instances not.

From this number of cases in which information as to complicity is given it cannot be said that the fact of difference of race or nationality or likeness of race or nationality in itself shows any special effect in either offenses in which the act involves opposition between the persons engaged, or those in which the act involves coöperation between the persons engaged.

12. GEOGRAPHICAL DISTRIBUTION³⁹

Those offenders giving homes elsewhere than Gary are considered nonresidents. This term here includes those having legitimate business in Gary and working there every day, as well as bona fide nonresidents. The residents of Gary, those giving a Gary address as their home, are divided into five groups according to the district of Gary in which they live; those living on the North Side, those living on the South Side, those living in Tolleston, those living in Gary with no street and number specified, and those living in other parts of Gary not included in the first three districts.⁴⁰

An examination of the cases arranged according to this classification and race or nationality group shows that the Americans have the highest proportion of nonresidents, followed by the Old Immigration, the New Immigration and the Colored having very much smaller proportions. Of the total number of cases, 17.38 per cent are nonresidents of Gary. This comparatively high proportion of nonresidents, however, is not so significant a fact in crime in Gary because of the fact that this study includes many individuals who have their homes in Chicago or other nearby cities and towns, coming in to Gary to work every day on street cars and trains; persons who under other conditions would have their residence in Gary.

Of those offenders giving a street and number as their place of residence in Gary, by far the greatest numbers live in the North Side and South Side districts. Of the single race or nationality units of the Old Immigration, the Germans alone show higher proportions living on the South Side, due to the number of pros-

³⁹Original tables, pp. 151-155. See Preface to this study.

⁴⁰See Introduction, Gary and its Population, p. 7.

titutes included in their numbers, and to the fact that most of the houses of prostitution were located on the South Side.

The Americans and Old Immigration show a little over half as many living on the North Side as on the South Side, while the Colored and New Immigration show a very small proportion living on the North Side and a very large proportion on the South Side.

Of the total numbers, 11.02 per cent live on the North Side and 56.97 per cent or over half the total number of cases live on the South Side. That is, as would be expected, the greatest numbers live in the part of Gary where are located the saloons, the houses of prostitution, bad housing conditions, bad sanitation, etc.

13. INDUSTRIAL STATUS⁴¹

Two hundred ninety-four different businesses, occupations, or professions are given by the offenders in this study. These occupations are here classified in nine groups according to the character of the work and the wage or salary received. Group I includes the irregular, low-paid workers, chiefly women such as chambermaids, washerwomen, seamstresses, etc., wages \$4 to \$6 a week or 20 to 25 cents an hour. Group II includes small independent businesses such as junk dealers, fruit-stand keepers, scissors griaders, etc., where the income is small and indefinite. Group III includes the unskilled laborers, such as common laborers, janitors, loaders, drivers, porters, section hands, etc., where the wage is 17½ cents to 24 cents an hour, \$2.90 to \$3 a day, \$18 to \$20 a week, and \$30 to \$75 a month. Group IV includes the semi-skilled workers, such as bottom makers, chip-pers, drill press hands, handymen, heater helpers, roller helpers, riggers, stockers, etc., where the wage is \$3 to \$5 a day of from 10 to 12 hours, and \$75 to \$105 a month. Group V includes skilled workers, such as axle makers, brick layers, catchers, coopers, coremakers, electricians, stationary engineers, hammer-smiths, heaters, plumbers, rollers, steamfitters, telegraph operators, etc., where the wage is 29 cents to 75 cents an hour, \$3.15 to \$8 a day, \$12 to \$25 a week, and \$70 to \$200 (assistant rollers and straighteners) and \$300 (rollers) a month, 10 to 12 hours a day. Group VI includes professional men such as attorneys, correspondents, physicians, musicians, lecturers, editors, etc., where no wage, salary, or income can be specified. Group VII

⁴¹Original tables, pp. 155-159. See Preface to this study. See also Appendix, Table VI.

includes business men, such as cashiers, collectors, contractors, grocers, manufacturers, merchants, tailors, etc., where no wage, salary, or income can be specified. Group VIII includes those engaged in agriculture, as farmers, farm hands, etc., where no wage, salary, or income can be specified. Another group would include those engaged in miscellaneous occupations and occupations where information is too indefinite to make a classification, as beggar, officer, student, axle mill, dynametic, fisherman, railroader, sheet mill, steel mill, etc., where no wage or salary can be specified; a classification left out of this study as too indefinite to be of any practical value.

This classification as to character of work and the verification of wage or salary is based on information given by labor foremen in some of the industrial plants in Gary, according to labor conditions prevailing in Gary at the time of the investigation.

Arranging the cases in this study according to the occupational grouping given above and race or nationality group and sex, in group I, irregular, low-paid work, of total numbers of both sexes the Colored show by far the greatest proportion, followed in order by the Old Immigration, the Americans, and the New Immigration. Of the females in this occupational group, the New Immigration shows the highest relative proportion followed in order by the American, the Old Immigration, and the Colored.

In occupational group II, small independent business, of total numbers of both sexes, the New Immigration shows the highest relative proportions (due to the large number of Jews from countries of the New Immigration in this group) followed in order by the Americans, the Old Immigration, and the Colored.

In occupational group III, unskilled labor, the New Immigration shows by far the highest relative proportion, followed in order by the Colored, the Old Immigration, and the Americans.

In occupational group IV, semi-skilled work, the Old Immigration show the highest relative proportion, followed in order by the Americans, the New Immigration, and the Colored.

In occupational group V, skilled work, the Americans and Old Immigration show by far the highest relative proportion, followed in order by the New Immigration and the Colored.

In occupational group VI, professions, the Americans show the highest proportional numbers, followed in order by the Colored, the Old Immigration, and the New Immigration.

In occupational group VII, business men, the New Immigration shows the highest relative proportion (due to the num-

ber of Jews and Greeks) followed in order by the Americans, the Old Immigration, and the Colored.

In occupational group VIII, agriculture, the Americans show the highest relative proportion, followed in order by the Old Immigration and the New Immigration, the Colored showing no cases.

The examination of the cases arranged in this way shows that in general the New Immigration and the Colored cases belong to occupational classes much lower in the scale than the American and Old Immigration cases.

Of the total numbers, by far the highest proportion, almost half of the total, belong to the group of unskilled laborers, followed in order by the skilled laborers, the low-paid irregular workers, business men, semi-skilled workers, small independent business men, agricultural workers, and fewest in the group of professional men. The first five groups include 82.05 per cent, over three-fourths of the total numbers. That is, the great majority of the cases belong to occupational groups low in the scale.

SECTION II⁴²

Section II of this study of adult crime in Gary consists of 965 cases coming into the justice of the peace courts from 1910 to 1913 inclusive, a period of four years.⁴³ In the material used for this study information as to single race or nationality unit or race or nationality group is not given, but the material is based on color and nativity, that is, cases are listed as colored and white, native born and foreign born.

Arranging these cases according to color and nativity, the foreign born show the highest absolute numbers, followed by the native born, the Colored showing very few absolute numbers. Roughly comparing the proportion which each color and nativity group furnishes to the total amount of crime in this study with the proportion which each color and nativity group furnishes to the general population of Gary, the figures indicate that the foreign born bear more than their fair share of offenders, the native born less, and the Colored less.⁴⁴

Comparing the proportion of foreign born offenders in this study in Gary with that of foreign born prisoners enumerated in

⁴²Original tables, pp. 160-167. See Preface to this study. See also Appendix, Table VII.

⁴³See p. 43 of this study.

⁴⁴See this study, p. 45, for sources of error in comparison.

the United States, June 30, 1904, and with that of prisoners committed to institutions in the United States during 1904⁴⁵ Gary shows a much higher proportion of foreign born offenders. This difference may be due somewhat to the fact that the figures for the United States include only the offenses in which there were commitments, while this study includes many offenses in which no sentence is imposed, and many minor offenses in which in general the foreign born exceed the native born.

Arranging the cases according to types of offense, in offenses against the person the foreign born show the greatest relative proportions; in offenses against property the foreign born also show slightly greater relative proportions; but in offenses against society the native born show highest relative proportions.

Arranging these cases according to kind of offense and sex, in offenses against the person and against property the males exceed the females; but in offenses against society the females far exceed the males, due to the large number of females offending against chastity and morality.

SECTION III⁴⁶

Section III of the study of adult crime in Gary consists of 87 cases, the more serious cases coming into the criminal courts from Gary 1910 to 1915 inclusive, cases in which sentences were given for imprisonment in the Indiana State Prison at Michigan City, the Indiana Reformatory at Jeffersonville, or the Woman's Prison at Indianapolis.⁴⁷

Arranging these cases according to race or nationality group, the Americans show the greatest absolute numbers followed in order by the New Immigration, the Colored, and the Old Immigration.

Comparing the proportions which each race or nationality group furnishes to the total amount of crime to the proportion which that race or nationality group furnishes to the general population of Gary (roughly), the figures indicate that the American, the Colored, and the Old Immigration bear more than their proportional share of these more serious crimes, and the New Immigration much less.

Specific kinds of offenses represented in this study are: assault and battery with intent to kill, felonious assault and rape, murder,

⁴⁵U. S. Census, 1910, Vol. I, Population, p. 568; Koren, p. 40.

⁴⁶Original tables, pp. 168-173. See Preface to this study. See also Appendix, Tables VIII, IX.

⁴⁷See p. 44 of this study for description of this group.

rape, robbery, petty larceny, grand larceny, burglary, forgery, false pretense, sodomy, and bigamy. Arranging the cases according to classifications of offense and race or nationality group, offenses against chastity and morality show too few cases to offer any conclusions. Of offenses against the person the Colored show the highest relative proportion, followed by the Americans and New Immigration in almost equal proportions, the Old Immigration showing no cases. Of offenses against property the New Immigration shows the highest relative proportions followed in order by the Americans, the Old Immigration, and the Colored.

Arranging these cases according to age groups and race or nationality groups, the Americans show the greatest number of cases in the age period 16 to 19, the Colored 25 to 29, the Old Immigration 20 to 24, and the New Immigration 20 to 24. The greatest number of cases of all races or nationalities occur from 16 to 34 years inclusive.

Only 6 cases of females are shown in this study, 3 Americans and 3 Colored. Of these cases, 3 are for grand larceny, 2 for bigamy, and one for murder. One is 20 years of age, two 24 years, one 30, one 32, and one 36.

SECTION IV⁴⁸

Section IV of this study of adult crime in Gary consists of 36 cases, the less serious cases coming into the criminal courts from Gary, 1910 to 1915 inclusive, cases in which sentences were commitments to the Lake County Jail, the Indiana State Penal Farm, or the Correctional Department of the Indiana Woman's Prison.⁴⁹

Arranging these cases according to race or nationality group, the New Immigration shows the highest absolute numbers followed in order by the Old Immigration, the Colored, and the American.

Roughly comparing the relative proportion which each race or nationality group furnishes to the total amount of crime in this study to the proportion which that race or nationality furnishes to the general population of the United States, the New Immigration and the Colored appear to show more than their proportional amount of crime, and the Old Immigration and the Americans less.

⁴⁸Original tables, pp. 174-179. See Preface to this study. See also Appendix, Tables X, XI.

⁴⁹See p. 44 of this study for description of this group.

Specific kinds of offenses represented in this study are assault and battery with intent to kill, felonious assault and battery, robbery, petty larceny, grand larceny, burglary, forgery, false pretense, embezzlement, sodomy, and bigamy. Arranging the cases according to classification of offenses and race or nationality group, of offenses against the person the Colored show the highest relative proportions followed in order by the Old Immigration, the Americans, and the New Immigration. Of offenses against property, the New Immigration shows the highest relative proportions, followed in order by the Old Immigration, the Americans, and the Colored. Two-thirds of all the cases are offenses against property and only one-fourth against the person. Offenses against society are very few in number.

Arranging the cases according to age groups, the greatest number of cases of all races or nationalities appear in the age group 20 to 29 years.

Only one case of a female appears in this study, one Colored woman for assault and battery.

V. Conclusion

CONSISTENT with the conclusion in the Special Report of the United States Census on Prisoners and Juvenile Delinquents in 1904 for the United States as a whole, this study of juvenile delinquency and adult crime in Gary shows that the Americans and the Old Immigration do bear more than their proportional share of more serious adult crime, but less than their proportional share of juvenile delinquency and petty adult crime; the New Immigration bears less than its proportional share of the more serious adult crimes, but more than its proportional share of juvenile delinquency and petty adult crime; and the Colored bear more than their proportional share of juvenile delinquency and both petty and more serious adult crimes; that is, the unfavorable relation which the races or nationalities of the New Immigration and the Colored race bear to juvenile delinquency and petty adult crime established for the United States as a whole, including both rural and urban communities, holds true also for Gary, a single urban community.

Some of the associations of juvenile delinquency and petty adult crime given in this study bear also a certain direct or indirect relation to economic and social class, while certain others have nothing to do with economic and social class. For example, such an association as housing conditions bears a very definite relation to economic and social class, while such an association as age bears little relation, if any, for practically the same ages are found in all classes.

In this study those associations of juvenile delinquency and petty adult crime which bear a relation to economic and social class are: in juvenile delinquency, the disposition of the case, repetition of offense, physical and mental abnormality, bad associates, geographical distribution of cases, housing conditions, family life, and the industrial status of the family; in adult crime, illiteracy, geographical distribution, and industrial status. These associations of juvenile delinquency and petty adult crime, taken together, are sufficient to indicate quite definitely the economic and social classes from which juvenile and petty adult offenders in Gary are recruited.

In juvenile delinquency the disposition of the case is based on the relation of the child to his environment. Commitments to institutions indicate in a general way that the environment is such that no hope of success is offered by returning the child to it. Such an environment is a characteristic accompaniment of low economic and social class. Of the total number of cases of juvenile delinquents in this study, 32.3 per cent are committed to institutions. To this group the New Immigration contributes 48.3 per cent of its number, and the American and Old Immigration only 7.4 per cent and 25.0 per cent of their respective numbers. That is, a high per cent of all the cases come from a highly unfavorable environment, and a higher relative proportion of the New Immigration comes from the unfavorable environment than of the Americans and the Old Immigration.

Repetition of offense indicates an environment so unfavorable that cases returned to it must fail. In this study, 18.6 per cent of the total number of juvenile delinquents are second offenders, and of these cases the New Immigration furnishes 26.6 per cent of its numbers, and the American and Old Immigration 7.4 per cent and 12.5 per cent respectively. Here again is shown the high per cent of all the cases living in an unfavorable environment, with a higher relative proportion of the New Immigration than of the Americans and the Old Immigration.

A high proportion of subnormal physical and mental qualities accompanies low economic and social class. Of the cases of juvenile delinquents in this study, 24.5 per cent are clearly subnormal physically or mentally, and of this number the New Immigration and the Colored furnish 28.3 per cent and 28.57 per cent of their respective total numbers, while the Americans and Old Immigration furnish 18.51 per cent and 12.5 per cent respectively. That is, a high proportion of all the cases show clearly those subnormal physical and mental qualities quite generally accompanying low economic and social class, and of these the New Immigration and the Colored show higher relative proportions than the Americans and the Old Immigration.

Illiteracy depends to a large extent on conditions other than economic and social class, but since it is seldom found to any extent in the higher economic and social classes, for the purpose here it may be considered an accompaniment of low economic class. In this study in petty adult crime, 35.7 per cent of the total number are illiterate; and of this number the New Immigration and the Colored furnish 59.1 per cent and 16.8 per cent

of their respective total numbers, while the Americans and the Old Immigration furnish 1.2 per cent and 8.5 per cent respectively. That is, of the total number, a high proportion is illiterate, and of these the New Immigration and the Colored show higher relative proportions than the American and the Old Immigration.

In juvenile delinquency, many of the New Immigration cases show specifically associations with persons of a low moral character; associations against which children of a higher social and economic class would be protected.

In every community the district in which the population lives indicates very clearly the economic and social classes in the population. In the introductory study of Gary and its population, the South Side is described in general as the poorest part of the city; that is, the part characterized by saloons, houses of prostitution, crowded unsanitary conditions, lack of order, and poor living conditions in general. The North Side is described in general as the best part of the city; that is, the part characterized by regulation, order in planning and in building, good housing conditions, good streets, good sanitary conditions, and only 2 saloons. Of the juvenile delinquents in this study, 59.30 per cent of the families live on the South Side; and of these the New Immigration and the Colored show 88.46 per cent and 66.66 per cent of their respective numbers; while the Americans and the Old Immigration show 9.09 per cent and none of their respective numbers. Of petty adult offenders, 56.97 per cent live on the South Side; and of these the New Immigration and the Colored furnish 71.49 per cent and 85.78 per cent of their respective total numbers; and the Americans and Old Immigration only 20.16 per cent and 23.04 per cent respectively. That is, of all the cases of both juvenile delinquents and petty adult offenders a very high proportion live in the poorer district of the city, and of these the New Immigration and the Colored show very much higher relative proportions than the Americans and the Old Immigration.

In juvenile delinquency, the housing conditions are those of the lower economic and social classes. The average rental per family is \$15.97 a month, an abnormally high rental in consideration of the comforts received therefor. The average number of rooms to a family is 4.01; the New Immigration and the Colored average 3.54 and 2 rooms to a family respectively, the Americans and the Old Immigration 4.92 and 5.6 rooms to a family despite the fact of the smaller number in the families of

the latter. The average rental paid per room is \$4.21; the New Immigration and the Colored paying an average of \$3.31 and \$4.25 a room, respectively, the Americans and Old Immigration paying \$5.62 and \$3.68 a room, the differences in price by no means measuring the differences in comforts received.

In juvenile delinquency, the conditions of home life are those of the lower economic and social classes. Of the total number, 87.2 per cent show very unfavorable home conditions. Of these the New Immigration and the Colored show 88.46 per cent and 100 per cent of their respective numbers, and the Americans and Old Immigration 81.81 per cent and 83.33 per cent respectively. That is, of all the cases a very high per cent show quite unfavorable home conditions, and of these the New Immigration and the Colored show somewhat higher relative proportions than the Americans and the Old Immigration.

Industrial status bears perhaps the most definite relation to economic and social class. In juvenile delinquency 10.46 per cent of the parents are engaged in low-paid, irregular work, 41.86 per cent in unskilled labor, and 30.23 per cent in skilled labor. In group I, low-paid, irregular work, the New Immigration and the Colored furnish 11.51 per cent and 16.66 per cent of their respective numbers, and the Americans and Old Immigration 9.0 per cent and none of their numbers respectively; in group II, unskilled labor, the New Immigration and the Colored furnish 59.61 per cent and 50.0 per cent of their respective numbers, and the Americans and Old Immigration 4.5 per cent and 16.67 per cent respectively; in group III, skilled labor, the New Immigration and the Colored furnish 7.69 per cent and none of their respective numbers, and the Americans and the Old Immigration 81.82 per cent and 66.66 per cent respectively.

In petty adult crime, 8.51 per cent are engaged in irregular low-paid work, 2.63 per cent in small businesses, 48.72 per cent in unskilled labor, 3.46 per cent in semi-skilled labor, 18.73 per cent in skilled labor, 0.52 per cent in professions, 3.59 per cent in business, and 0.56 per cent in agriculture. In group I, irregular low-paid work, the New Immigrants and the Colored show 5.01 per cent and 25.59 per cent of their respective numbers, and the Americans and the Old Immigration 7.4 per cent and 7.65 per cent respectively; in group II, small businesses, the New Immigration and the Colored show 2.99 per cent and 1.29 per cent of their respective numbers, and the American and Old Immigration 2.05 per cent and 1.70 per cent respectively; in

group III, unskilled labor, the New Immigration and the Colored show 63.54 per cent and 50.38 per cent of their respective numbers, and the American and Old Immigration 19.95 per cent and 29.36 per cent respectively; in group IV, semi-skilled labor, the New Immigration and the Colored show 2.99 per cent and 1.55 per cent of their respective numbers, and the American and Old Immigration 4.73 per cent and 5.10 per cent respectively; in group V, skilled labor, the New Immigration and the Colored show 12.04 per cent and 10.85 per cent of their respective numbers, and the Americans and Old Immigration show 35.18 per cent and 32.34 per cent respectively; in group VI, the professions, the New Immigration and the Colored show 0.24 per cent and 0.77 per cent of their respective numbers, and the Americans and Old Immigration 1.23 per cent and 0.63 per cent respectively; in group VII, business, the New Immigration and the Colored show 4.64 per cent and 1.03 per cent of their respective numbers, and the Americans and Old Immigration 3.08 per cent and 2.12 per cent respectively; in group VIII, agriculture, the New Immigration and the Colored show 0.30 per cent and none of their respective numbers, and the Americans and Old Immigration 1.85 per cent and 0.63 per cent respectively. These figures show that the great majority of cases of juvenile delinquency and petty adult crime are industrial workers; and of these the greatest number belong low in the industrial scale. The figures also show that the New Immigration and the Colored cases belong lower in the industrial scale than the Americans and Old Immigration.

These considerations show that in every case where the associations of juvenile delinquency and petty adult crime given in this study indicate, in any way, economic and social class, they indicate *low* economic and social class; and that in every case the New Immigration and the Colored are farther down in the scale than the American and the Old Immigration. The unfavorable environment of the juvenile delinquents, the sub-normal physical and mental qualities of the juvenile delinquents, the great number of illiterates among the petty adult offenders, the low associates of the juvenile delinquents, the crowded, unsanitary districts of the city from which both juvenile delinquents and petty adult offenders come, the bad housing conditions and unfavorable home conditions of the juvenile delinquents, the low industrial status of both juvenile delinquents

and petty adult offenders—all these are also associations of low economic and social class. Also in every case these conditions are more unfavorable in the New Immigration and Colored than in the American and Old Immigration.

That is, juvenile delinquents and petty adult offenders in Gary are recruited from the lower economic and social classes; and of these the New Immigration and the Colored occupy positions in the scale lower than the Americans and the Old Immigration. So that a greater amount of juvenile delinquency and petty adult crime must be expected in the two former race or nationality groups—a conclusion which is borne out by the actual facts.

It is unfair then in juvenile delinquency and petty adult crime in Gary to compare the New Immigration and the Colored, consisting chiefly of the lower economic and social classes, with the Americans and the Old Immigration including *all* social and economic classes because the unfavorable relation of the races or nationalities of the New Immigration, and to a certain extent that of the Colored race, to juvenile delinquency and petty adult crime is determined not by the race or nationality group, but by the social and economic class to which these races or nationalities belong.

VI. Appendix

1. Tables

A few of the most important tables in the study as originally prepared are included in this Appendix.¹

TABLE I. **A**, CASES AND FAMILIES OF JUVENILE DELINQUENTS IN GARY, 1912-14, ARRANGED ACCORDING TO SINGLE RACE OR NATIONALITY *UNITS* BY NUMBER AND PER CENT; **B**, THE SAME ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP*

A

Nationality or Race	Number		Per Cent	
	Family	Case	Family	Case
1. American.....	22	27	25.6	26.5
2. Colored.....	6	7	7.0	6.9
3. Croatian.....	6	7	7.0	6.9
4. German.....	4	6	4.6	5.9
5. Hungarian.....	7	7	8.1	6.9
6. Irish.....	2	2	2.3	1.9
7. Italian.....	3	4	3.5	3.9
8. Lithuanian.....	4	4	4.6	3.9
9. Polish.....	16	21	18.7	20.6
10. Russian.....	2	2	2.3	1.9
11. Servian.....	1	1	1.2	1.0
12. Slavish.....	13	14	15.1	13.7

B

1. American.....	22	27	25.6	26.5
2. Colored.....	6	7	7.0	6.9
3. Old Immigration.....	6	8	6.9	7.8
4. New Immigration.....	52	60	60.5	58.8
Totals.....	86	102	100.0	100.0

¹ See Preface to this study.

TABLE II. A, CASES OF JUVENILE DELINQUENTS IN GARY, 1912-14, ARRANGED ACCORDING TO KIND OF OFFENSE AND SINGLE RACE OR NATIONALITY *UNIT* BY NUMBER; B, THE SAME BY RACE OR NATIONALITY *GROUP*

A

Nationality or Race	Against Society			Against the Person	Against Property			Others				
	Incorrigibility	Confirmed Truancy	Against Morals			Rape	Assault	Railroad Trespass	Petit Larceny	Breaking In	Destroying School Property	City Ordinance
			Vicious Gang	Immoral Girls	Obscene Language, Indecent Conduct							
1. American.....	6	4	4	6	4			3				
2. Colored.....				2					3			2
3. Croatian.....		2			1				4			
4. German.....	2	3				1						
5. Hungarian.....	1	5		1								
6. Irish.....	2											
7. Italian.....		1							3			
8. Lithuanian.....							1		2	1		
9. Polish.....		5		2	1				9	1	3	
10. Russian.....									2			
11. Servian.....		1										
12. Slavish.....		3							9			

B

1. American.....	6	4	4	6	4	..	..	3	..	..	..	..
2. Colored.....	..	..	..	2	..	..	..	..	3	..	..	2
3. Old Immigration.....	4	3	..	..	1	..	..	..	..	..	..	..
4. New Immigration....	1	19	..	3	2	..	1	..	29	2	3	..
Total.....	11	26	4	11	6	1	1	3	32	2	3	2

TABLE III. A, FAMILIES OF JUVENILE DELINQUENTS IN GARY, 1912-14, ARRANGED ACCORDING TO INDUSTRIAL GROUPS AND SINGLE RACE OR NATIONALITY *UNIT* BY NUMBER; B, ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP* BY PER CENT

A

Nationality or Race	I Low- Paid Irregu- lar	II Com- mon Labor	III Skilled Labor	Not Given	Miscel- laneous	Per Cent
1. American.....	2	1	18	1		
2. Colored.....	1	3		2		
3. Croatian.....	1	3		2		
4. German.....		1	3			
5. Hungarian.....		7				
6. Irish.....			1	1		
7. Italian.....	1	1	1			
8. Lithuanian.....		2		1	1	
9. Polish.....	3	10		1	2	
10. Russian.....		1			1	
11. Servian.....		1				
12. Slavish.....	1	6	3	3		
Total.....	9	36	26	11	4	

B

1. American.....	9.0	4.5	81.82	4.5		100
2. Colored.....	16.66	50.0		33.34		100
3. Old Immigration.....		16.67	66.66	16.67		100
4. New Immigration.....	11.51	59.61	7.69	13.4	7.72	100
Totals.....	10.46	41.86	30.23	12.81	4.64	100

TABLE IV. A. CASES OF OFFENDERS IN SECTION I OF THE STUDY OF CRIME IN GARY IN 1914 ARRANGED ACCORDING TO SINGLE RACE OR NATIONALITY UNIT BY NUMBER AND PER CENT; B, ARRANGED ACCORDING TO RACE OR NATIONALITY GROUP AND PER CENT

A

Nationality or Race	Number	Per Cent
1. Albanian.....	3	0.10
2. American.....	486	16.03
3. Arabian.....	1	0.03
4. Armenian.....	1	0.03
5. Austrian.....	197	6.50
6. Belgian.....	2	0.07
7. Bohemian.....	16	0.53
8. Bulgarian.....	7	0.23
9. Canadian.....	6	0.20
10. Chinese.....	7	0.23
11. Colored.....	387	12.77
12. Croatian.....	69	2.27
13. Cuban.....	1	0.03
14. Danish.....	5	0.17
15. English.....	25	0.82
16. Finn.....	2	0.07
17. French.....	13	0.43
18. German.....	143	4.72
19. Greek.....	76	2.51
20. Hollander.....	2	0.07
21. Horoat.....	22	0.72
22. Hungarian.....	100	3.30
23. Indian.....	1	0.03
24. Irish.....	180	5.94
25. Italian.....	71	2.34
26. Japanese.....	2	0.07
27. Jewish.....	69	2.28
28. Korean.....	1	0.03
29. Lithuanian.....	85	2.80
30. Macedonian.....	11	0.36
31. Mexican.....	4	0.13
32. Norwegian.....	6	0.20
33. Persian.....	7	0.23
34. Polish.....	331	10.92
35. Roumanian.....	141	4.65
36. Russian.....	210	6.93
37. Ruthenian.....	1	0.03
38. Scotch.....	20	0.66
39. Scotch Irish.....	3	0.10
40. Servian.....	115	3.79
41. Slavish.....	104	3.43
42. Slovak.....	5	0.17
43. Spanish.....	5	0.17
44. Swedish.....	59	1.95
45. Swiss.....	1	0.03
46. Syrian.....	9	0.30
47. Welsh.....	6	0.20
Not given.....	13	0.43
Total.....	3,031	100.00

TABLE IV.—Continued

B

Nationality or Race	Number	Per Cent
1. American.....		16.03
2. Colored.....		12.77
3. Old Immigration.....		15.51
4. New Immigration.....		53.94
5. Asiatic Immigration.....		.92
6. Other Americans.....		.40
Not given.....		.43
Total.....		100.00

TABLE V. CASES OF OFFENDERS IN SECTION I OF THE STUDY OF CRIME IN GARY IN 1914 ARRANGED ACCORDING TO KIND OF OFFENSE AND RACE OR NATIONALITY *GROUP* BY PER CENT

Nationality or Race	Total Crime	Against the Person	Against Property	Against Chastity and Morality	Against Public Policy
1. American.....	16.03	9.14	9.21	19.31	19.89
2. Colored.....	12.77	8.02	12.62	27.87	10.59
3. Old Immigration.....	15.51	8.58	9.82	16.87	19.05
4. New Immigration.....	53.94	72.94	67.17	34.47	48.56
5. Asiatic Immigration.....	0.92				
6. Other Americans.....	0.40				
Not given.....	0.43				
Total.....	100.00	100.00	100.00	100.00	100.00

TABLE VI. CASES OF OFFENDERS IN SECTION I OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO INDUSTRIAL CLASSES AND RACE OR NATIONALITY *GROUP* BY PER CENT²

Nationality or Race	I	II	III	IV	V	VI	VII	VIII	Total	
									No.	Per Cent
1. American.....	7.4	2.05	19.95	4.73	35.18	1.23	3.08	1.85	486	100
2. Colored.....	25.58	1.29	50.38	1.55	10.85	0.77	1.03	.....	387	100
3. Old Immigration...	7.65	1.70	29.36	5.10	22.34	0.63	2.12	0.63	470	100
4. New Immigration...	5.01	2.99	63.54	2.99	12.04	0.24	4.64	0.30	1635	100
5. Asiatic Immigra- tion ³.....	.....	.....	.....	.....	.....	.....	.....	.....	28	100
6. Other Americans ³..	.....	.....	.....	.....	.....	.....	.....	.....	12	100
7. All races or nation- alities.....	8.51	2.63	48.72	18.73	18.74	0.52	3.59	0.56	3031	100

TABLE VII. CASES OF OFFENDERS IN SECTION II OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO NATIVITY AND KIND OF OFFENSE BY PER CENT

	Native Born	Foreign Born	Unknown
Against the person.....	23.11	35.64	39.13
Against property.....	6.22	9.25	5.43
Against society ⁴	46.22	36.72	42.39
All others.....	24.45	16.82	13.05
Totals.....	100.00	100.00	100.00

² Class I, irregular low-paid work, wages \$4 to \$6 a week; class II, small independent businesses (as junk dealer), income small and indefinite; class III, unskilled laborers, wages 17½ cents to 24 cents an hour; class IV, semi-skilled workers, wages \$3 to \$5 a day; class V, skilled workers, wages \$3.15 to \$8 a day; class VI, professional men; class VII, business men; class VIII, agricultural workers.

³ Numbers too small for calculation.

⁴ Includes offenses against chastity and morality and against public policy.

TABLE VIII. CASES OF OFFENDERS IN SECTION III OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP* BY NUMBER AND PER CENT

	Number	Per Cent
American.....	31	35.63
Colored.....	16	18.39
Old Immigration.....	9	10.34
New Immigration.....	25	28.74
Asiatic Immigration.....	2	2.29
Other Americans.....	3	3.46
Not given.....	1	1.15
Totals.....	87	100.00

TABLE IX. CASES OF OFFENDERS IN SECTION III OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP* AND KIND OF OFFENSE BY NUMBER AND PER CENT

Nationality or Race	Against the Person		Against Property		Against Chastity and Morality		Miscellaneous		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
American.....	10	32.25	14	45.16	1	...	6	...	31	100
Colored.....	10	62.5	5	31.25	1	...	...	...	16	100
Old Immigration.....	...	...	4	44.44	2	...	3	...	9	100
New Immigration.....	8	32.0	16	64.00	...	...	1	...	25	100
Asiatic Immigration.....	1	50.0	...	...	...	...	1	...	2	100
Other Americans.....	2	66.66	...	...	...	...	1	...	3	100

TABLE X. CASES OF OFFENDERS IN SECTION IV OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP* BY NUMBER AND PER CENT

	Number	Per Cent
American.....	4	11.11
Colored.....	6	16.67
Old Immigration.....	7	19.44
New Immigration.....	19	52.78
Total.....	36	100.00

TABLE XI. CASES OF OFFENDERS IN SECTION IV OF THE STUDY OF CRIME IN GARY ARRANGED ACCORDING TO RACE OR NATIONALITY *GROUP* AND KIND OF OFFENSE BY PER CENT

	Against the Person		Against Property		Against Chastity and Morality		Total	
	Num-ber	Per Cent	Num-ber	Per Cent	Num-ber	Per Cent	Num-ber	Per Cent
American.....	1	25.0	2	50.00	1	25.0	4	100
Colored.....	2-1	50.0	2	33.33	1	16.67	6	100
Old Immigration.....	3	42.85	4	57.15	.....	.....	7	100
New Immigration.....	2	10.52	16	84.21	1	5.27	19	100
Total.....	9	25.00	24	66.67	3	8.33	36	100

2. Bibliography

(This bibliography is not meant to be complete in any of the subjects related to this study but is a list of those publications found most useful in preparing this study.)

- Addams, Jane. *The Spirit of Youth and the City Streets*. New York, The Macmillan Co., 1909.
- Anderson, Sir Robert, K.C.B., LL.D. *Criminals and Crime: Some Facts and Suggestions*. London, James Nesbet and Co., Ltd., 22 Berners St., W., 1907.
- Aschaeffenburg, Gustav. *Crime and Its Repression*. Translated by Adalbert Albrecht. Boston, Little, Brown, and Co., 1913.
- Bache, Joseph E. "Delinquency and the Responsibility of the School Toward It." *Proceedings of the National Education Association*, Denver, July, 1909.
- Baker, Ray Stannard. "What the United States Steel Corporation Really is and How It Works." *McClure's Magazine* 18:5, Nov., 1901.
- Balch, Emily Greene. *Our Slavic Fellow Citizens*. New York, Charities Publication Committee, 1910.
- Baldwin, Roger N. "Statistics Relating to Juvenile Delinquents." *Proceedings of the National Conference of Charities and Correction*, p. 523, edited by Alexander Johnson. Press of the Archer Printing Co., Fort Wayne, Ind., 1910.
- Barnett, Mary G. *Young Delinquents: A Study of Reformatory and Industrial Schools*. New York, E. P. Dutton and Co., 1913.
- Barrows, Samuel J. "Children's Courts in the United States: Their Origin, Development, and Results." *Report of the International Prison Commission*, 1904. Washington, Government Printing Office, 1904.
- Beccaria. See Farrer, James Anson, *Crimes and Punishments*.
- Bennet, William James Early. *Crime and Education: The Duty of the State Therein*. London, 1846.
- Boies, Henry M. *The Science of Penology: The Defense of Society against Crime*. G. P. Putnam's Sons, New York and London, 1901.

- Bolt, Richard A. "Juvenile Offenders in the City of Detroit." Michigan Political Science Publications, No. 5, 1903, pp. 277-338.
- Bonger, William Adrian. *Criminality and Economic Conditions*. Translated by Henry P. Horton. Boston, Little, Brown, and Co., 1916.
- Booth, Charles. *Life and Labour of the People in London*. Vols. I-VII. London and New York, Macmillan and Co., 1892.
- Bowen, Mrs. Jos. T. "The Delinquent Child of Immigrant Parents." Proceedings of the National Conference of Charities and Corrections, Buffalo, 1909, p. 255, edited by Alexander Johnson. Press of Fort Wayne Printing Co., Fort Wayne, Ind.
- Brandenburg, Broughton. *Imported Americans*. New York, Frederick A. Stokes Company, 1904.
- Breckenridge, Sophonisba P. "Neglected Widowhood in the Juvenile Court." American Journal of Sociology 16:53-87, July, 1910.
- Breckenridge, Sophonisba P., Ph.D., and Abbott, Edith, Ph.D.: *The Delinquent Child and the Home*. New York, Charities Publication Committee, Russell Sage Foundation, 1912.
- Brinton, Daniel G., A.M., M.D., *Races and Peoples: Lectures on the Science of Ethnography*. New York, N.D.C. Hodges, 47 Lafayette Place, 1890.
- Brockway, Z. R. Address, National Prison Association, Denver, 1895. Proceedings of the Annual Congress of the National Prison Association of the U.S., p. 305. Pittsburg, Shaw Brothers (printers), 120 Sixth Street, 1896.
- Brockway, Z. R. See A Symposium: Physical Bases of Crime.
- Bryce, James A. *The American Commonwealth*. Vols. I, II. New York, The Macmillan Co., 1914.
- Burton, Charles Pierce. "Gary, A Creation." Independent 70:337-345, Feb. 16, 1911.
- Carpenter, Edward. *Prisons, Police, and Punishment: An Inquiry into the Causes and Treatment of Crime and Criminals*. London, Arthur C. Fifield, 44 Fleet St., E.C., 1905.
- Commons, John R. *Races and Immigrants in America*. New York and London, The Macmillan Co., 1907.
- Copley, F. B. "A Great Corporation Investigates Itself." American Magazine 74:642-659, Oct., 1912.
- Crothers, T. D. See A Symposium: Physical Bases of Crime.
- Currier, Albert H. *The Present Day Problem of Crime*. Richard G. Badger, The Gorham Press, Boston, 1912.
- Day, Samuel Phillips. *Juvenile Crime: Its Causes, Character, and Cure*. London, J. F. Hope, 16, Great Marlborough Street, 1858.
- Deniker, J., Sc.D. *The Races of Man: An Outline of Anthropology and Ethnography*. London, E. C., The Walter Scott Publishing Co., Ltd., Paternoster Square; New York City, Charles Scribner's Sons, 153-157 Fifth Avenue, 1906.
- De Quatrefages, A. *The Human Species*. London, Kegan Paul, Trench, Trubner and Co., Ltd., Paternoster House, Charing Cross Road, 1903.
- De Quiros, C. Bernaldo. *Modern Theories of Criminality*. Translated by Alfonso de Salvio. Boston, Little, Brown, and Company, 1911.

- Devon, James, medical officer of H. M. Prison at Glasgow. *The Criminal and the Community*. London, John Lane the Bodley Head; New York, John Lane Co., 1912.
- Doty, Madeline Zabriske. "Treatment of Minor Cases of Juvenile Delinquency." *Academy of Political Science*, Vol. I, No. 4, July, 1911, pp. 694-704.
- Drähms, August. *The Criminal: His Personnel and Environment*. New York and London, The Macmillan Co., 1900.
- DuBois, W. Burghardt. *Some Notes on Negro Crime, Particularly in Georgia*. Atlanta, Ga., Atlanta University Press, 1904.
- Duckworth, W. L. H., M.A. *Morphology and Anthropology*. Cambridge, University Press, 1904.
- Duprat, G. L. *La Criminalité dans l'Adolescence: Causes et Remedés d'un mal social actuel*. Paris, Felix Alcan, Editeur, Librairies Felix Alcan et Guillaumin Réunies, 108, Boulevard Saint-Germain, 108, 1909.
- Elliott, Edward C. *A Symposium: Physical Bases of Crime*.
- Everson, George. "New Facts About Delinquency." *Survey* 32:488, Aug. 8, 1914.
- Fairchild, Henry Pratt. *Immigration*. New York, The Macmillan Co., 1913. *Greek Immigration to the United States*. New Haven, Yale University Press; London, Henry Froude, Oxford University Press, 1911.
- Farrer, James Anson. *Crimes and Punishments*. Including a new translation of Beccaria's *Dei Delitti e del Pene*. London, Chatto and Winders Piccadilly, 1880.
- Ferrero, Gina Lombroso. *Criminal Man: According to the Classification of Cesare Lombroso*. New York and London, G. P. Putnam's Sons, 1911.
- Ferri, Enrico. *Criminal Sociology*. New York, D. Appleton and Co., 1896.
- Fitch, John A. "Old Age at Forty." *American Magazine* 71:655-664, March, 1911. "The Human Side of Large Outputs." *Survey* 27:1145-1160, Nov. 4, 1911.
- Flexner, Abraham. *Prostitution in Europe*. Introduction by John D. Rockefeller, Jr. New York, The Century Co., 1914.
- Flower, Elliott. "Gary, the Magic City." *Putnam's Magazine* 5:643-653, March, 1909.
- Folks, Homer. *The Care of Destitute, Neglected, and Delinquent Children*. New York and London, The Macmillan Co., 1902.
- Folks, Homer, and Towne, Arthur W. "Probation in the Juvenile Court." *Academy of Political Science*, Vol. I, No. 4, July, 1911, pp. 682-693.
- Garofalo, Baron Raffaele. *Criminology*. Translated by Robert Wyness Millar. Boston, Little, Brown, and Co., 1914.
- Gault, Robert H. *A Symposium: Physical Bases of Crime*.
- Gillen, J. L. *A Symposium: Physical Bases of Crime*.
- Glueck, Bernard, M.D. *Studies in Forensic Psychiatry*. Boston, Little, Brown, and Co., 1916. See also *A Symposium: Physical Bases of Crime*.
- Goddard, Henry H. See *A Symposium: Physical Bases of Crime*.
- Graham, Stephen. *With Poor Immigrants to America*. New York, The Macmillan Co., 1914.
- Grosmolard, M. "Criminalité juvénile". *Archives d'anthropologie criminelle*, April and May, 1903; *American Journal of Sociology* 9:283, Sept., 1913 (Abstract by T. J. R.).

- Gross, Hans, J.U.D. *Criminal Psychology: A Manual for Judges, Practitioners, and Students.* Translated by Horace M. Kallen, Ph.D. Boston, Little, Brown, and Co., 1911.
- Haddon, Alfred C., Sc.D., F.R.S. *The Races of Man and their Distribution.* London, Milner and Co., Ltd., Paternoster Row; Halifax, Raglan Works.
- History of Anthropology.* London, Watts and Company, 17 Johnson's Court, Fleet Street, E.C., 1910. *The Study of Man.* New York, G. P. Putnam's Sons; London, Bliss, Sands, and Co., 1898.
- Hall, Bert. "Truancy, A Few Causes and a Few Cures." *Addresses and Proceedings of the National Education Association*, Denver, July, 1909, p. 217. See also *A Symposium: Physical Bases of Crime.*
- Hall, Winfield Scott. See *A Symposium: Physical Bases of Crime.*
- Hart, Hastings H. "Backward, Truant, and Delinquent Children." *Charities* 20:277-280, May 23, 1908.
- Haskins, Frederic J. *The Immigrant: An Asset and a Liability.* New York, Chicago, Toronto, London, and Edinburgh, Fleming H. Revell Co., 1913.
- Healy, William. See *A Symposium: Physical Bases of Crime.*
- Healy, William, A.B., M.D., and Healy, Mary Tenny, B.L. *Pathological Lying, Accusation, and Swindling.* Boston, Little, Brown, and Co., 1915.
- Healy, William, A.B., M.D. *The Individual Delinquent: A Textbook of Diagnosis and Prognosis for all Concerned in Understanding Offenders.* Boston, Little, Brown, and Co., 1915.
- Henderson, Charles Richmond. See *A Symposium: Physical Bases of Crime.*
- Henderson, Charles Richmond, Ph.D. *Dependent, Defective, and Delinquent Classes: Introduction to the Study of.* Boston, D. C. Heath and Co., 1909.
- Hendrick, Burton J. "Children of the Steel Kings." *McClure's Magazine* 41: 61-69, 1913.
- Hilles, Chas. D. "Juvenile Delinquency." *Charities* 10:558-559, July 6, 1903.
- Hourwich, Isaac A. "Immigration and Crime." *American Journal of Sociology* 17:478-490. Jan., 1912. *Immigration and Labor: The Economic Aspects of European Immigration to the United States.* New York and London, G. P. Putnam's Sons, 1912.
- Huntington, Ellsworth. *Civilization and Climate.* New Haven, Yale University Press, London, Humphrey Melford, Oxford University Press, 1915.
- Jenks, Jeremiah W., Ph.D., LL.D., and Lauch, W. Jett, A.B. *The Immigration Problem.* New York and London, Funk and Wagnalls Co., 1912.
- Keane, A. H., F.R.G.S. *Ethnology.* Cambridge, University Press, 1896. *Man, Past and Present.* Cambridge, University Press, 1899.
- Kellor, Frances A. *Experimental Sociology: Descriptive and Analytical. Delinquents.* New York and London, The Macmillan Co., 1901.
- Koren, John. "Prisoners and Juvenile Delinquents in Institutions, 1904." *Special Report of the United States Census Bureau.* Washington Government Printing Office, 1907.
- Leffingwell, Albert, M.D. *Illegitimacy, and the Influence of Seasons upon Conduct.* London, Swan Sonnenschein and Co.; New York, Charles Scribner's Sons, 1892.

- Lindsey, Ben B. "Childhood and Morality." *Journal of Proceedings of the National Education Association*, Denver, July, 1909, p. 146. Introduction to *The Young Malefactor* by Thomas Travis.
- Lombroso, Cesare, M.D. "Precocity in Crime." *Independent* 54:2136-2138, Sept. 4, 1902. *Crime, Its Causes and Remedies*. Translated by Henry P. Horton, M.A. Boston, Little, Brown, and Co., 1911.
- Lombroso, Cesare, and Ferrero, William. *The Female Offender*. New York, D. Appleton and Co., 1895.
- Lydston, G. Frank, M.D. *The Diseases of Society: The Vice and Crime Problem*. Philadelphia, London, J. B. Lippincott Co., 1904.
- MacDonald, Arthur. *Criminology*. New York, London, Toronto, Funk and Wagnalls Co., 1893.
- Mack, Julian W. "The State and the Child." *Academy of Political Science*, Vol. I, No. 4, July, 1911, pp. 676-681.
- Mangold, Geo. B., Ph.D. *Child Problems*. New York, The Macmillan Co., 1910.
- Mayo-Smith, Richmond. *Emigration and Immigration*. New York, C. Scribner's Sons, 1890.
- McConnell, Ray Madding, Ph.D. *Criminal Responsibility and Social Constraint*. New York, Charles Scribner's Sons, 1912.
- McKim, W. Duncan, M.D., Ph.D. *Heredity and Human Progress*. New York and London, G. P. Putnam's Sons, 1900.
- Mercier, Charles, M.B. *Criminal Responsibility*. Oxford, Clarendon Press, 1905.
- Merrill, Lilburn, M.D. "Diagnostic Methods as an Aid in Juvenile Court Administration." *Proceedings of the National Conference of Charities and Corrections*, Seattle, 1913, p. 324. Fort Wayne, Ind., Fort Wayne Printing Co., 1913.
- Mitchell, C. Ainsworth. *Science and the Criminal*. Boston, Little, Brown, and Co., 1911.
- Morrison, Wm. Douglas. *Crime and Its Causes*. London, Swan Sonnenschein and Company, Paternoster Square, 1891. *Juvenile Offenders*. New York, D. Appleton and Co., 1897.
- Mumford, John Kimberly: "This Land of Opportunity." *Harper's Weekly* 52:2023, June 13, 1908.
- Münsterberg, Hugo. *On the Witness Stand: Essays on Psychology and Crime*. New York, Doubleday, Page and Co., 1909.
- Neal, A. O. "The Indiana Plan for Truants, Indigent and Pauper Children." *Addresses and Proceedings of the National Education Association*, Denver, July, 1909, p. 877.
- Newkirk, H. D. See *A Symposium: Physical Bases of Crime*.
- Otis, Margaret. "Another Laboratory of Research in Delinquency." *Survey* 31:160-161, Nov. 8, 1913.
- Parmelee, Maurice. *The Principles of Anthropology and sociology in their Relations to Criminal Procedure*. New York, The Macmillan Co., 1908.
- Parsons, Philip A., Ph.D. *Responsibility for Crime*. *Columbia University Studies in History, Economics, and Public Law*, Vol. XXIV, No. 3, 1909, p. 445.

- Plint, Thos. *Crime in England: Its Relation, Character, and Extent as Developed from 1801 to 1848.* London, Charles Gilpin, 5, Bishopsgate Street Without; Edinburgh, Adam and Charles Black, Dublin, J. P. Gilpin, 1851.
- Quinton, R. F., M.D. *Crime and Criminals, 1876-1910.* 39 Paternoster Row. London; New York, Bombay, and Calcutta, Longmans, Green, and Co., 1910.
- Rhoades, Mabel Carter. "A Case Study of Delinquent Boys in the Juvenile Court of Chicago." *American Journal of Sociology* 13:57, July, 1907.
- Richman, Julia. "What Share of Blame for the Increase of the Number of Truants and Incurables Belongs to the School?" *Addresses and Proceedings of the National Education Association*, Denver, 1909, p. 222.
- Roberts, Peter, Ph.D. *The New Immigration.* New York, The Macmillan Co., 1912.
- Robertson, Frank W. See *A Symposium: Physical Bases of Crime.*
- Robinson, Louis Newton. *History and Organization of Criminal Statistics in the United States.* Boston and New York, Houghton Mifflin Co., The Riverside Press, Cambridge, 1911.
- Russell, Charles E. B., and Rigby, L. M. "The Making of the Criminal." London and New York, Macmillan and Co., 1906.
- Schoff, Hannah Kent. *The Wayward Child: A Study of the Causes of Crime.* Indianapolis, The Bobbs-Merrill Co., 1915.
- Semple, Ellen Churchill. *Influences of Geographic Environment.* New York, Henry Holt and Company; London, Constable and Company, Ltd., 1911.
- Sleyster, Rock. See *A Symposium: Physical Bases of Crime.*
- Smith, Samuel George, Ph.D., LL.D. *Social Pathology.* New York, The Macmillan Co., 1911.
- Sneve, Haldor. See *A Symposium: Physical Bases of Crime.*
- Spaulding, Edith R. See *A Symposium: Physical Bases of Crime.*
- Steiner, Edward A. *On the Trail of the Immigrant.* London, Edinburgh, New York, Chicago, and Toronto, Fleming H. Revell Co., 1906. *The Immigrant Tide, Its Ebb and Flow.* London, Edinburgh, New York, Chicago, and Toronto, Fleming H. Revell Co., 1909.
- Stephens, Geo. Asbury. *The Juvenile Court System of Kansas.* Topeka, Kan., Mail and Breeze Publishing Co., 1906.
- Stewart, W. Blair. See *A Symposium: Physical Bases of Crime.*
- Streightoff, Frank Hatch, Ph.D. *The Standard of Living Among the Industrial People of America.* Boston and New York, Houghton Mifflin Co., The Riverside Press, Cambridge, 1911.
- Tarde, Gabriel. *Penal Philosophy.* Translated by Rapelje Howell. Boston, Little, Brown, and Co., 1912.
- Taylor, Graham Romeyn. "Satellite Cities." *Survey* 29:13-24, Oct. 5, 1912, 29:781-798, March 1913. Also *Satellite Cities.* New York and London, D. Appleton and Co., 1915. "Creating the Newest Steel City." *Survey* 22:20-36, April 3, 1909.
- Thompson, Donna Fay. "The Associations of Dependence in Seven Hundred Families." Typewritten MS., Indiana University, 1914.
- Topinard, Paul. *L'Anthropologie et La Science Sociale.* Paris, Masson et Cie, Editeurs, Libraires de L'Academie de Medecin, 120 Boulevard

- Saint Germain, 1900. *Elements d'Anthropologie Generale*. Paris, Adrien Delahaye, et Emile Legrosnier, Editeurs, Place de L'ecole-de-Medecin, 1885. *L'Anthropologie*. Paris, G. Reenwald et Cie, Libraires-Editeurs, 15, Rue des Saints-Pères, 15, 1876. *Anthropology*. Translated by Robert T. H. Bartley, M.D. London, Chapman and Hall, 193, Piccadilly, Philadelphia, J. B. Lippincott and Co., 1878.
- Travis, Thomas, Ph.D. *The Young Malefactor: A Study in Juvenile Delinquency, Its Causes, and Treatment*. New York, Thomas Y. Crowell and Co., 1908.
- Waite, Edw. F. See A Symposium: Physical Bases of Crime.
- Ward, Lester F. "Social Classes in the Light of Modern Sociological Theory." *American Journal of Sociology* 13:617, Jan., 1908.
- Warne, Frank Julian, Ph.D. *The Immigrant Invasion*. New York, Dodd, Mead, and Co., 1913.
- Wilcox, Reynold Webb. See A Symposium: Physical Bases of Crime.
- Wilson, Thomas, LL.D. "Criminal Anthropology." *Annual Report of the Board of Regents of the Smithsonian Institution*, July, 1890, p. 617. Washington, Government Printing Office, 1891.
- Wines, Frederick Howard, LL.D. *Punishment and Reformation*. New York, Thomas Y. Crowell and Co., 1910.
- Wirt, William. "Utilization of School Plant." *Proceedings of Conference of Charities and Corrections*, Cleveland, 1912, pp. 58-62.
- Witter, John H. See A Symposium: Physical Bases of Crime.
- Wright, Carroll Davidson. "The Relation of Economic Conditions to the Causes of Crime." Philadelphia, *Annals of the American Academy*, Vol. III, pp. 764-784, 1893.
- * * * * *
- A Symposium: Physical Bases of Crime. Papers and discussion contributed to the XXXVIII Annual Meeting of the American Academy of Medicine, Minneapolis, June 14, 1913. Easton, Pa., American Academy of Medicine Press, 1914.
- Reports of the United States Immigration Commission. Abstracts of Reports of the Immigration Commission, Vols. I and II, 1910-11. 61st Congress, 3d Session 1910-11, Senate Documents. Washington, Government Printing Office, 1911.
- State of Indiana Bureau of Statistics. *Fifteenth Biennial Report* (21st Vol.), 1913-14. Edited by Thos. W. Brolley, Chief of Bureau. Indianapolis, Wm. B. Burford, contractor for state printing and binding, 1914.
- The Child First: A State's Interest, A City's Care. Report of the Juvenile Court of Salt Lake City, Utah. Published by the Juvenile Court Commission, the Boys' Betterment League of Salt Lake City, and the Juvenile Court Association of Utah, 1905.
- The National Prison Association of the United States of America. Reports, 1883 to 1915.
- Report of the Commissioner-General of Immigration, 1906. U.S. Dept. of Labor, Bureau of Immigration.
- Great Britain, Board of Trade. *Cost of Living in American Towns*. London, Published by His Majesty's Stationery Office, Wyman and Sons, Ltd., Fetter Lane, E.C., and 32, Abingdon St., S.W., 1911.

Burns, Annotated Indiana Statutes, [Revision of 1914. Indianapolis, [Bobbs-Merrill Co., 1914.

Charities 11:88-90, July, 1903. "Destitute, Neglected and Delinquent Children, Medical," "The First Juvenile Court Building," 18:587-589, August 17, 1907, "Prisoners and Juvenile Delinquency," "Minor Offenses Most Common," "Juvenile Delinquents," 10:598-599, June 20, 1903. "Dependent, Delinquent, and Neglected Children." 11:461-474, Nov. 21, 1903. "The New York State Conference of Charities and Correction."

Eleventh Census of the United States, 1890.

Thirteenth Census of the United States, 1910.

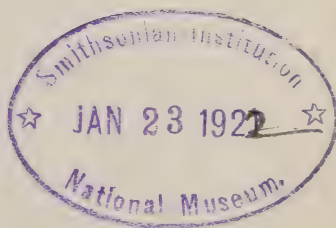
Review of Reviews (American) 37:354-5, March, 1908. "Elbert H. Gary: Real Head of the Steel Trust."

World's Work. 30:391, August, 1915. "The Gary School System Moves East."

Independent 84:452, December 20, 1915. "The Gary School Plan" (List of references). Survey, 29:6-7. "The Human Side of Large Outputs."

The World Almanac and Encyclopedia, 1916. Issued by the Press Publishing Co., Pulitzer Building, New York.

INDIANA UNIVERSITY STUDIES



Study No. 50

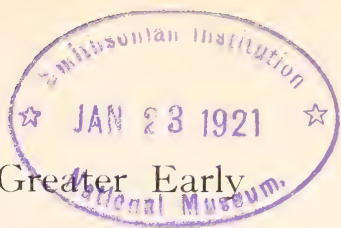
WILLIAM DE MORGAN AND THE GREATER EARLY
VICTORIANS. By WILL T. HALE, Ph.D., Assistant
Professor of English, Indiana University.

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

STUDY No. 50

WILLIAM DE MORGAN AND THE GREATER EARLY
VICTORIANS. By WILL T. HALE, Ph.D., Assistant
Professor of English, Indiana University.



William De Morgan and the Greater Early Victorians

By WILL T. HALE, Ph.D., *Assistant Professor of English,*
Indiana University

As soon as the critics began their work on William De Morgan, they discovered at once that he was a "belated Early Victorian". "The most interesting phenomenon in recent fiction", observed one of these, "is the recrudescence of the old-fashioned novel of the Dickens and Thackeray type thru the single-handed efforts of William De Morgan".¹ And another, speaking of him as if he were a counterfeiter, declared, "He needs defenders. He writes a novel according to the Victorian tradition, hardly as a master, but as the cleverest of disciples."²

It cannot be denied that in some important respects De Morgan resembles the Early Victorians more closely than the writers of today.³ His novels have more pages than the general run of the best-sellers — and this fact has proved a stumbling-block to most of the reviewers. After some favorable criticism of *Alice-for-Short*, one of them has objected, "But the book contains five hundred and sixty pages"⁴ — as if the Supreme Court had definitely decided the exact number of pages a book should contain. Another has designated *Somehow Good* as "a long, leisurely, and garrulous novel", and added that the author "does not seem to be aware of the custom prevailing among the patrons of free libraries of selecting a book according to the number of quotation marks seen on a page".⁵

Indeed, it must be confessed that none of this novelist's works are suitable for those persons who must finish a book at one sitting, and more appropriate literature could be suggested for reading on the street cars or Pullmans. These wonderful books

¹*Independent*, Feb. 13, 1908, p. 369.

²*Literary Digest*, Aug. 24, 1907, p. 272.

³This is not true in the case of *An Affair of Dishonor*, which, being a historical romance, is essentially different from the rest of De Morgan's works. In this paper this novel will not be considered except in those cases where it conforms to the rest of the author's novels.

⁴*Athenæum*, July 6, 1907, p. 10.

⁵*Independent*, Feb. 13, 1908, p. 370.

were made for the Morris chair at home, when the wind howls outside and all is snug within, and we have time for the real luxury of reading. They are longer than the average novel today, it is true, but, except *When Ghost Meets Ghost*, they fall short of many of the Early Victorian volumes⁶ — which some people still find time to read. Their size can be justified, however, without recourse to these precedents. In the first place, De Morgan's humor and charming personality sustain the interest thruout. Instead of sighing with relief at the end, we wish that we had more to read. We are sorry that the author has quit speaking, for he is one to whom we could listen all night, and we hate to see the last of the people we have come to know so intimately and to love so dearly. Even *When Ghost Meets Ghost*, with its eight hundred and sixty-two closely printed pages, we close with regret, for tho Mrs. Pictur and Uncle Mo are dead, we could listen to David and Dolly Wardle thru another volume equally long.

In the second place, an author's purpose should determine the length of his books. De Morgan's aim is obviously to represent life with the highest degree of verisimilitude. Therefore, since the highest degree of verisimilitude is produced by the inclusion of a large section of life and a considerable number of years, he has needed more than the usual number of pages to accomplish his purpose. In each of his first three novels, which most people consider his best works, he has given a broad, extensive view of life embracing a generation. *Joseph Vance* extends over three generations. In doing this, he has followed the Early Victorian tradition — and rightly, for in spite of the tiresome effect often due to the exaggeration of this principle by the Victorians,⁷ it contributes in no small degree to that vivid impression of life that they produce. The modern tendency in fiction is the impressionistic and intensive, in which the author aims to focus the reader's attention in one direction, to direct his eye to one central object in the picture, to give a concentrated impression of a single thing. This method, which includes a short time, naturally requires fewer pages than the epic style of the Early Victorians. Within a smaller volume the modern novelist gives a sharp, clear-cut,

⁶Thackeray's *Newcomes* and *Virginians*. Dickens' *David Copperfield*, etc., and George Eliot's *Middlemarch* and *Daniel Deronda*, which are approximately the same size, contain about 800 pages. *Joseph Vance* has 528 pages, *Alice-for-Short* 563. *Somehow Good* 565, *It Never Can Happen Again* 688, *An Affair of Dishonor* 528, *A Likely Story* 370, *When Ghost Meets Ghost* 862, *The Old Madhouse* 567.

⁷Their abuse of this principle was due to various reasons: for example, the exigencies of serial publication led Dickens and Thackeray on and on, and the subordination of George Eliot's artistic sense to her fondness for preaching and soul-analysis warped a great deal of her work out of its true proportions. Their principle, however, was a true one, and the fact that they carried it to extremes does not invalidate it.

magnified description of a minute part of life, and his work has many excellent qualities wanting in that of his predecessors, but he fails to give their elemental, universal impression of life.

In the third place, since De Morgan is primarily interested in people, characterization is the fundamental thing with him. But a character seems most vivid and distinct in the process of development. Therefore, in order to have sufficient time for the development of his characters, and to add the necessary details of atmosphere and perspective, he had to make his volumes large.

Again, it has been complained, William De Morgan has the Early Victorian fondness for leisurely procedure. Thus says one reviewer of *Joseph Vance*: "The book is written in the leisurely fashion. It suggests the talk of an intelligent man who has something to say, and all night in which to say it."⁸ Another, speaking for modern fiction, has laid down this law: "The author must go ahead in a straight line, like an express train, never looking back at what happened before, never looking around to see what other people are doing, never allowing the reader to guess what is going to happen next."⁹ This is exactly the opposite of what De Morgan has done: an express train is the last thing on earth which he does move like. His *modus operandi* resembles rather a loaded van attempting an ascent and sliding back as rapidly as it ascends. This, however, is one of his finest characteristics, tho a trait borrowed directly from his predecessors. The modern author holds himself aloof from his pages; he is unobtrusive, like the teller of the ballad; he is omniscient and omnipresent, but he wears the cap of Fortunatus. De Morgan, like Dickens and Thackeray and George Eliot, projects his personality into his stories. He may sit at one side, and we may forget him for a moment, but we know that he is there. In his comments on his characters' conversations, his shrewd observation of their peculiarities, his original moralizings, he belongs to the school of Dickens and Thackeray, and, like them, he is his craft's master. The following comments on their characters will show the close relation of these three authors.

De Morgan thus describes the attitude of Professor and Mrs. Sales Wilson to each other:

For a peculiarity in this family was that the two heads of its always spoke to one another through an agent. So clearly was this understood that direct speech between them, on its rare occasions, was always ascribed by

⁸*Athenæum*, July 28, 1906, p. 97.

⁹*Independent*, February 13, 1908, p. 369.

distant hearers to an outbreak of hostilities. If either speaker had addressed the other by name, the advent of the Sergeant-at-arms would have been the next thing looked for.¹⁰

Dickens thus depicts Mrs. Pawkins' feelings at dinner time.

Great heaps of indigestible matter melted away as ice before the sun. It was a solemn and awful thing to see. Dyspeptic individuals bolted their food in wedges; feeding, not themselves, but broods of nightmares, who were continually standing at livery within them. Spare men, with lank and rigid cheeks, came out unsatisfied from the destruction of heavy dishes, and glared with watchful eyes on the pastry. What Mrs. Pawkins felt each day at dinner time is hidden from all human knowledge. But she had one comfort. It was very soon over.¹¹

Altho, on the whole, De Morgan seems closer to Dickens. Thackeray writes in the same vein:

We have all heard of the dying French Duchess, who viewed her coming dissolution and subsequent fate so easily, because she said she was sure that Heaven must deal politely with a person of her quality; — I suppose Lady Kew had some such notions regarding people of rank: her long-suffering towards them was extreme; in fact, there were vices which the old lady thought pardonable, and even natural, in a young nobleman of high station, which she would never have excused in persons of vulgar condition.¹²

In commenting on his characters, our novelist avoids a fault that Thackeray often betrays. As we read the latter's works and enjoy those charming remarks which he makes so felicitously, we realize that his attitude is that of a showman to his puppets, and sometimes we see him pull the string that moves them. At the end of *The Newcomes* we find this flaw:

Two years ago, walking with my children in some pleasant fields, near to Berne, in Switzerland, I strayed from them into a little world; and, coming out of it presently, told them how the story had been revealed to me somehow, which for three-and-twenty months the reader has been pleased to follow. As I write the last line with a rather sad heart, Pendennis and Laura, and Ethel and Clive, fade away into Fable-land. I hardly know whether they are not true; whether they do not live near us somewhere.

They were alive, and I heard their voices; but five minutes since was touched by their grief.

Dickens' conclusion of *David Copperfield* has more of the atmosphere of reality:

And now my written story ends. I look back, once more — for the last time — before I close these leaves.

I see myself, with Agnes at my side, journeying along the road of life. I see our children and our friends around us; and I hear the roar of many voices, now indifferent to me as I travel on.

¹⁰*Somehow Good*, p. 155.

¹¹*Martin Chuzzlewit*, vol. I, chap. xvi.

¹²*The Newcomes*, vol. II, chap. xxii.

If, as some critics assert, Thackeray was a cynic and a snob, there De Morgan parts company with him. Our author is more like Dickens, big-hearted and catholic, even in dealing with small souls like Goody Vereker, or Lucy Snaith, or such villains as Thornton Daverill and his son. In the tones of his asides,¹³ however, he resembles Thackeray rather than Dickens, for the former has a lighter touch and does not seem so serious.¹⁴ Thus Thackeray often speaks as he draws the reader away from his story:

The true pleasure of life is to live with your inferiors. Be the cock of your village; the queen of your coterie; and, besides very great persons, the people whom Fate has specially endowed with this kindly consolation, are those who have seen what are called better days — those who have had losses. I am like Caesar, and of a noble mind: if I cannot be first in Piccadilly, let me try Hatton Garden, and see whether I cannot lead the *ton* there.¹⁵

Dickens does not moralize so often as Thackeray, but when he does, he has an aside like this:

Breakings up are capital things in our school days, but in after life they are painful enough. Death, self-interest, and fortune's changes, are every day breaking up many a happy group, and scattering them far and wide; and the boys and girls never come back again.¹⁶

Our author omits the *ye's* and *thou's* that Thackeray so frequently employs. And in his asides he does not, like George Eliot, preach sermons. He reflects on life after this delightful manner:

There is nothing stranger in nature than the development of odiousness. What an entirely delightful person was * * * * * when he was eight months old, in all the bloom of his creases, furnished with a matchless nape to his neck in which his appreciators might burrow; his premature baldness beginning to show a light down of premature hair; his premature arms that would not bend at the joints, being held by two firm but tender crease-flanks; and that always did precisely the same thing suddenly; his delightful practice of stopping abruptly at the end of the first syllable of speech. What an entirely satisfactory and adequate little human creature as far as it went! And look at it now that it has gone forty years farther. I ask you, at the risk of outrage to your feelings and Mrs. Grundy's, to say what you would do if * * * * * were fetched down *now* in his nightgown to be shown.¹⁷

Self-help is a glorious thing, and one of our numerous birth-rights, but it should stop short of helping oneseif to all of the gravy in the dish.¹⁸

¹³By the "asides" is meant the moralizings and the like, in distinction from the comments on the characters.

¹⁴George Eliot's asides are heavier and more "theological", or didactic, than De Morgan's.

¹⁵*The Newcomes*, vol. I, chap. ix.

¹⁶*Pickwick Papers*, chap. xxx.

¹⁷*Joseph Vance*, p. 153.

¹⁸*Ibid.*, p. 154.

One of the delightful things about these asides is their conformity to our own experience. We have thought the same thing many times ourselves — only we did not, and could not, put it in his inimitable way. For example, look at these passages:

What a singular thing it is, when you come to think of it, that so many people will sell you a thing worth a pound for sixpence, who won't give you a shilling outright on any terms!¹⁹

Have you not yourself been interrupted again and again in your narrative of your symptoms by your friend's anxiety to give details of his own; or indeed (if he was Mrs. Packles) to lay claim to afflictions precisely identical but of greater severity?²⁰

In this way the most harmless little fib will grow and grow, and become an infliction to its papa or mamma, who will have to nourish and protect it as though it were truly the apple of their eye.²¹

We have all seen "strangers converse freely and unbend at a Fire or a really satisfactory Accident, with loss of life".²² We have all experienced this waitress: "She had on orderly soul, for she turned over the lump of sugar that had a little butter on it, so as to lie on the buttery side and look more tidy-like."²³ When De Morgan delays his narrative with such charming revelations of his personality, we do not care how leisurely he proceeds, for, like Dickens and Thackeray, he is at his best when moving slowly. However, when, in the fashion that George Eliot started, he begins to indulge in lengthy, protracted analyses of the minds and motives of his characters, he strays from his best — for, as one critic has remarked of George Eliot, "The reading of her later works is scarce to be classed among the pleasures of life; it is one of the duties; there is so much to learn in them."²⁴ If she influenced him at all, this fondness for psychological analysis represents the extent of her influence upon him. Dickens and Thackeray show no signs of it. The former, on the whole, confines himself to the external aspects of his characters; the latter informs us as to the mental stages which his people have reached, but does not show the processes by which they got there. Traces of George Eliot's method appear in all of De Morgan's novels. In *It Never Can Happen Again* we certainly grow very tired of Alfred Challis and his "soul-brushings". Who cares to be kept informed in regard to so uninteresting a person? Much rather would we hear Lizarann or her "daddy" talk. Nor in *Alice-for-*

¹⁹*Somehow Good*, p. 555.

²⁰*Joseph Vance*, pp. 101-102.

²¹*The Old Madhouse*, p. 448.

²²*Joseph Vance*, p. 286.

²³*When Ghost Meets Ghost*, p. 2.

²⁴Charles F. Horne, *The Technique of the Novel*, p. 186.

Short is it the most exhilarating of occupations to watch Charley Heath make up his mind to claim Alice for himself. Fine as he is in many ways, he is too slow for even the most Victorian of modern readers. It takes a long, long time for the two old ghosts, Mrs. Pictur and Mrs. Marrowbone, to meet and recognize each other again.²⁵ Fred Cartaret and Charles Snaith both take too much of our time considering their problems.²⁶ We feel somewhat the same sort of lassitude during Joe Vance's indecision over Janey,²⁷ and Rosalind Graythorpe's "nettle-grasping".²⁸ This is, undoubtedly, the worst fault that De Morgan has, and it is only when his leisurely procedure is due to it that we want him to move on.

De Morgan closely follows Dickens in the forewords that precede each chapter.²⁹ In this respect, Dickens differs from both Thackeray and George Eliot. Thackeray usually has a short tag on his chapters, as, "In which Lady Kew leaves his Lordship quite convalescent",³⁰ or, "Injured Innocence".³¹ George Eliot has either a quotation of some sort³² or an abbreviated announcement like Thackeray's shorter ones.³³ Dickens' labels, which are usually longer than those of either of these, are very original and very characteristic of the author. For example, this strikes our eye in *Martin Chuzzlewit*:

Martin enlarges his circle of acquaintance; increases his stock of wisdom; and has an excellent opportunity of comparing his own experiences with those of Lummy Ned of the Light Salisbury, as related by his friend Mr. William Simmons.³⁴

In *Pickwick Papers* we find this:

Mr. Weller the Elder delivers some critical sentiments respecting literary composition; and assisted by his son Samuel, pays a small instalment of retaliation to the account of the reverend gentleman with the red nose.³⁵

The first chapter of *Joseph Vance* has this announcement, which clearly marks a development from the method of Dickens:

Of Joe Vance's Father and his unfortunate habits. How he quarrelled with a sweep who could butt; and suffered thereby. How Joe concealed the circumstance from his mother.

²⁵ *When Ghost Meets Ghost*.

²⁶ *The Old Madhouse*.

²⁷ *Joseph Vance*.

²⁸ *Somehow Good*.

²⁹ Except in *An Affair of Dishonor* and *The Old Madhouse*. None occur in these books.

³⁰ *The Newcomes*, vol. II, chap. xii.

³¹ *Ibid.*, vol. II, chap. xvi.

³² In *Daniel Deronda*, *Middlemarch*, and *Felix Holt*.

³³ In *The Mill on the Floss*, *Romola*, and *Adam Bede*.

³⁴ Vol. I, chap. xvii.

³⁵ Chap. xxxiii.

One thing strikes us as very odd in De Morgan's procedure. Frequently he has made the tone of his announcements entirely out of harmony with the contents of the chapters; for instance, "And how old Vance got very drunk. Eheu!"³⁶ and "Of Fenwick's surprise-bath in the British Channel".³⁷ Both of these refer to very serious circumstances, little as it appears. Evidently he seeks humor in this way, but what humor he produces is very much out of place. In *A Likely Story* these forewords assume unwieldy lengths that are out of all proportion to the chapters that follow.³⁸

De Morgan has none of the long descriptions that are characteristic of Dickens. He never gives us all at once an out-and-out description of a person or place, nor in describing his people does he enumerate their traits immediately. This portrait of Mr. Bob Sawyer illustrates Dickens' usual method of accompanying the introduction of a new character with an invoice of all his external equipment:

Mr. Bob Sawyer, who was habited in a coarse blue coat, which, without being either a great-coat or a surtout, partook of the nature and qualities of both, had about him that sort of slovenly smartness, and swaggering gait, which is peculiar to young gentlemen who smoke in the streets by day, shout and scream in the same by night, call waiters by their Christian names, and do various other deeds and acts of an equally facetious description. He wore a pair of plaid trousers, and a large rough double-breasted waistcoat; out of doors, he carried a thick stick with a big top. He eschewed gloves, and looked, upon the whole, something like a dissipated Robinson Crusoe.³⁹

De Morgan does not use this logical method, but treats his characters in a suggestive manner, giving the details gradually and casually. He follows the same in regard to their dispositions and peculiarities. We come to know his people gradually, just as in life. Herein lies the secret of the vivid impression that they make upon us. We become acquainted with them, as it were, instead of being told about them. His treatment of scenes and places is generally suggestive, also, tho rarely he describes a place after the manner of Dickens; for example, the description of St. Sennans-on-Sea in *Somehow Good*.⁴⁰ In the same volume he gives a picture of a London fog which reminds us of Dickens at the beginning of *Bleak House*.⁴¹ Usually he gives only the

³⁶*Joseph Vance*, chap. xxx.

³⁷*Somehow Good*, chap. xlv.

³⁸Of *A Likely Story*, chaps. iii and vi.

³⁹*Pickwick Papers*, chap. xxx.

⁴⁰Chap. xxvii.

⁴¹Chap. xxiii.

necessary details, and unless they have a good deal of significance, especially as perspective, he omits them. George Eliot and a great many writers pack their incidents in a great deal of unnecessary wadding, but he seldom commits this offense

In certain respects De Morgan's stories, as stories, remind us of the Victorians. Like them, as we have seen, he is no impressionist, but writes his stories on a broad scale, and extends them over a great canvas. He does not confine himself to the study of a single situation or problem; almost without exception, his stories include many characters, a number of years, and varied scenes. Unlike the Victorians, he writes without a purpose.⁴² He does not satirize society, like Thackeray, or reform abuses, like Dickens, or preach, like George Eliot.⁴³ In his view of life and intellectual training, too, he belongs to the present time. His treatment of Rosalind and Sally in *Somehow Good* shows how far removed he stands from Hawthorne's Puritanism in *The Scarlet Letter* and Dickens' attitude toward Emily in *David Copperfield*. He has a modern view of women, to say the least: Alice-for-Short smokes a cigarette now and then. His treatment of ghosts conforms to modern notions,⁴⁴ and he has this age's interest in psychical research. His theology, too, is up-to-date: Dr. Thorpe's belief concerning the hereafter, "the death of the ghost in the corpse", is the modern statement of the annihilation theory.⁴⁵

Technically, De Morgan's stories have the weaknesses that we find in those of the Early Victorians, tho in a smaller degree. His plots lack probability. For instance, in *Alice-for-Short* and *The Old Madhouse*, the ghosts appear too often for real ghosts; in *Joseph Vance* Christopher Vance's rise to sudden fortune is more phenomenal than credible;⁴⁶ in *Somehow Good* the circumstances that result in Fenwick's return to his wife could hardly have happened. The explanation of Dr. Cartaret's disappearance, in *The Old Madhouse*, is rather melodramatic. Since, to our author, as to his great predecessors, the plot is secondary, characterization holds the paramount place, and the plots take care of themselves. Consequently, they have no construction.^{46a} In the

⁴²The title *Somehow Good* sounds as if it belonged to a purpose novel, but there is no obtrusive teaching in the story.

⁴³Professor Phelps, in his *Essays on Modern Novelists* (p. 27), cannot be serious when he says, "Indeed, all of Mr. De Morgan's books might well be circulated as anti-alcohol tracts; the real villain in his tragedies is drink."

⁴⁴Cf. *Alice-for-Short* and *The Old Madhouse*.

⁴⁵*Joseph Vance*, chap. xl.

⁴⁶Cf. W. L. Phelps, *Essays on Modern Novelists*, p. 20.

^{46a}Mrs. De Morgan has made an interesting statement in this regard (*The Old Madhouse*, p. 566): "When my husband started on one of his novels, he did so without making any definite plot. He created his characters and then waited for them to act and evolve their own plot."

first place, when he has more than one plot in a story, the two do not always coalesce into a unity. Perhaps the worst instance in his novels of the "bifurcated plot", as Professor Matthews calls it, appears in *It Never Can Happen Again*: until the final catastrophe occurs, almost no connection exists between the story of Lizarann and her father and that of Challis and Judith. Lizarann's story and that of Challis' wife and Charlotte Eldridge have but the slightest relation, also. Notable instances of this same fault occur in Thackeray's *Vanity Fair* and George Eliot's *Middlemarch*. Most of Dickens' novels offend in the same way.

In the second place, De Morgan's plots do not move straight forward, but zig-zag back and forth. Either he will give us the details of a circumstance after he has told us of its occurrence, or he will drop the narrative at a very exciting moment and tell us about something else at a distance. He is very "Victorian" in this respect, and, like Dickens, provokes us exceedingly at times. This lack of plot construction, however, when combined with the excellent characterization found in our author, on the whole, adds to the verisimilitude of his stories. This certainly holds true in the case of Thackeray.⁴⁷ Life itself has ragged edges; it has not been finished off smooth; it zig-zags.

In still another way De Morgan breaks the threads of his plots. He stops at intervals to apologize to the reader for the lack of interest or progress in the narrative;⁴⁸ for example, this digression occurs in *Somehow Good*:

Our story is like the scherzo in one respect: it has to be given in detached jerks — literary, not musical — these jerks don't come at any stated intervals at all. The music was bad enough — so Sally and Laetitia thought — but the chronicle is more spasmodic still. However, if you want to know its remaining particulars, you will have to brace yourself up to tolerating an intermittent style. It is the only one our means of collecting information admits of.⁴⁹

The same thing appears in *It Never Can Happen Again*:

Those who measure events only by the bounce they manifest — their rapidity, or unexpectedness, or by the clamour that accompanies them — will wonder why any narrator of a story should think such flat incident worth recording. But observe! — it was the very flatness of this conversation that gave it its importance, coming as it did on the top of the exhilaration of Mr. Challis' visit, and his parting with that large and lively company of friends less than two hours ago.⁵⁰

⁴⁷Richard Burton, *Masters of the English Novel*, p. 206.

⁴⁸Professor Phelps has pointed out that in this De Morgan is in line with a tradition which has always characterized the English novel (*Essays on Modern Novelists*, pp. 13-15).

⁴⁹P. 87; see also p. 44.

⁵⁰P. 126.

It has been objected that, whereas in reading a story, ~~we~~ wants to forget the printed page and believe that the events are all happening, this method destroys all the illusion that the author has been able to produce.⁵¹ However, this can be said for it: altho it takes away the illusion that the events *are happening*, it increases the illusion that they *did happen*. For example, in the first passage quoted above, altho it is true that we are conscious that we are reading a story, at the same time, the allusion to Sally and Laetitia, as if they were real people, and the expression "our means of collecting information", as if the events actually happened, add very much to the impression of reality. The same may be said of the other passage. We really believe all the stronger that Mr. Challis is living and was very recently with a large and lively company of friends.⁵²

In the third place, De Morgan's plots have defective conclusions — externally — that is, in the way in which they are indicated. De Morgan loves to drop his curtain suddenly at a very exciting moment or interesting catastrophe, and then supply in the most round-about way the barest details of what we have a right to know. Joseph Vance suddenly quits writing, and the rest of the facts we get in a very improbable, complicated shape in a "Note by the Editor" and a "Postscript by the Publishers". Nothing more unnecessary or unnatural could have been devised. The impression forces itself upon us that the author is tired and does not care how slouchy an exit he makes. *Alice-for-Short* has an Addendum in the form of "An extract from the diary of the late Abbé Bernadin Fabrôt, of Boulestin l'Annonay", as published in the *Journal d'Hier*, February 29, 1853. *Somehow Good* provokingly ends with two letters — which does not seem fair, after the way we have been worked up over the drowning and resuscitation. In *It Never Can Happen Again* the thread suddenly snaps, and twelve months later the brief conversation between Athelstan Taylor and his wife (which is the first news that we have of their marriage) supplies all that we are ever to know. *An Affair of Dishonor* concludes with a manuscript confession that seems to have been made expressly for the reader, as a means of escape for the author. "A Belated Pendrift"

⁵¹W. L. Phelps, *Essays on Modern Novelists*, pp. 13-16.

⁵²De Morgan carries this device even farther — hardly so effectively. For example, in *Somehow Good*, chapter v, he makes a reference back to chapters i and ii: "It refers, at any rate, to the way in which the contents of chapters i and ii had become records of the past six months later, when the snow was on the ground four inches thick on Christmas — two inches, at least, having been last night's contribution — and made it all sweet and smooth all over so that there need be no unpleasantness."

Cf. also *Alice-for-Short*, pp. 478, 544.

takes the place of a conclusion to *When Ghost Meets Ghost*. We are left only to conjecture how De Morgan, if he had lived, would have brought out the explanations furnished by his wife in the last chapter of *The Old Madhouse*.

The Early Victorians are noted for their large number of characters. Dickens, Thackeray, and George Eliot have whole families of them in each novel. In *Pickwick Papers* the numbers extend into the hundreds. Today the custom is to concentrate on a few and to treat them in a highly intensive way. And yet, in spite of the admirable results of this, on the whole, the method of the Victorians tends to greater verisimilitude, for where a great many characters appear, the atmosphere of reality is increased. Perspective, which plays a great part in the veracity of representations of the real, is provided in a large degree where a number of characters are associated together. A greater appearance of reality occurs in an interplay of groups upon each other than in the episodes of isolated individuals or units of three or four. Even if a large number of characters tends to dissipate the attention and interest from the prominent ones and lessen their impression in certain ways, this is compensated for by the gain in verisimilitude due to the background created by the various relations of the individuals. This principle, which the Early Victorians often exaggerated, has been maintained by De Morgan very successfully. In each of his books, except that anomalous *An Affair of Dishonor*, the prominent characters abound in unusual numbers, and they appear sharply individualized, not only in the novel where they occur but also in comparison with the whole body of characters that the author has created. The Dragon, Goody Vereker,⁵³ Mrs. Challis, Charlotte Eldridge,⁵⁴ Lavinia Straker's mother,⁵⁵ Mrs. Percival Pellew,⁵⁶ Mrs. Hinchliffe,⁵⁷ and Lady Towerstairs⁵⁸ are all disagreeable and, except the last, middle-aged, and yet they are distinct personalities. Professor Sales Wilson,⁵⁹ Dr. Thorpe,⁵⁸ and Professor Fraser⁵⁷ are scholars of reputation; Joseph Vance, General Desprez,⁵⁸ Charley Heath,⁶⁰ Athelstan Taylor,⁶¹ Fenwick, Prosy, the Major,⁵⁹ and Charley Snaith⁵⁷ are fine gentlemen; Christopher Vance, his first wife, Mrs. Packles,⁵⁸ Blind Jim, Lizarann's uncle and

⁵³*Somehow Good.*

⁵⁴*It Never Can Happen Again.*

⁵⁵*Alice-for-Short.*

⁵⁶*When Ghost Meets Ghost.*

⁵⁷*The Old Madhouse.*

⁵⁸*Joseph Vance.*

⁵⁹*Somehow Good.*

⁶⁰*Alice-for-Short.*

⁶¹*It Never Can Happen Again.*

aunt,⁶¹ Alice's father and mother,⁶⁰ and Mr. and Mrs. Grewbeer,⁵⁷ all belong to the "submerged tenth" — and yet each of these characters not only seems entirely different from the others but appears as a real human being whom we recall by name. The same holds true of the charming young girls Lottie, Janey,⁵⁸ Alice-for-Short, Peggy,⁶⁰ Sally,⁵⁹ Gwen,⁶² and Elbows.⁵⁷ Even where certain accidental marks of resemblance exist, the characters are still sharply differentiated; for example, the two physicians, Dr. Johnson⁵⁸ and Prosy,⁵⁹ the three old men who die, Verrinder,⁶² the Colonel, and the Major,⁵⁹ and the devotees of free love, Challis⁶¹ and Joey Thorpe.⁵⁸ Besides these more prominent characters, we can never forget a great many others. Whenever a person enters the story casually, a cab-driver or a street-rat, he has a marked individuality. Porky Owls,⁵⁸ Frederick 'Orkins,⁶¹ and the unknown boy who insists on guiding Sally thru the fog,⁵⁹ resemble one another in no respect.

Our author's possibilities of character portrayal seem inexhaustible. He introduces characters so lavishly that he approaches very closely to prodigality. We meet Mr. Salter in the first chapter of *Somehow Good*, and that is the last that we ever see of him. We have as short an acquaintance with the man putting down the carpet at Professor Wilson's,⁶³ Mr. Peter Gunn, the Reverend Mr. Capstick,⁶⁴ the grouchy old gentleman on the tube,⁶³ and many others. A more parsimonious author would have preserved these as copy for future volumes. This liberality, however, has seldom led De Morgan into caricature. With rare exceptions, his people all live. And they do not belong to one class of society, as do most of those of his great predecessors. Dickens came truest to life in describing the lower classes; Thackeray wrote almost wholly of the upper classes; and George Eliot did her best work as the chronicler of middle-class country life. Yet De Morgan is just as much at home in the slums as with the upper classes. Altho Christopher Vance⁶⁴ is perhaps his best character, a number at the other end of the social ladder stand out almost as fine. Nor do his people belong to one class spiritually, tho he has more good than bad, mean ones. We do not get the impression from his books, as we do from Thackeray's, that the world is all bad, and the men and women are all rascals. No

⁵⁷*The Old Madhouse.*

⁵⁸*Joseph Vance.*

⁵⁹*Somehow Good.*

⁶⁰*Alice-for-Short.*

⁶¹*It Never Can Happen Again.*

⁶²*When Ghost Meets Ghost.*

⁶³*Somehow Good.*

⁶⁴*Joseph Vance.*

novelist has created so many lovely, charming people. And his good men and women do not act like sticks, as Dickens' generally do. And, like George Eliot's characters, his people have complex personalities, with both good and bad in them. Charley Heath,⁶⁵ admirable as he is, makes more or less a failure of his life; Rosalind Graythorpe⁶⁶ has a dark past; and Christopher Vance's death⁶⁷ resulted from drink. Athelstan Taylor⁶⁸ has a human as well as a theological nature; Fred Cartaret⁶⁹ barely escapes being true to his friend; even Daverill⁷⁰ is affected by the sight of his dead mother.

In his child-creations De Morgan is especially felicitous, exhibiting the keenest perceptions of child-psychology. Lizarann furnishes an instance of this.⁶⁸ Because of the Reverend Athelstan Taylor's effective measures against her uncle, Mr. Steptoe, she has taken the former for a policeman, and to herself calls him the "New Police". So, shortly afterwards, when she hears him tell Addie Fosset, "I suppose I shall have to, Addie. I always have to do all the dirty work", she wonders, "Did the New Police scrub underneath the beds, clear the flues of sut, scour out the sink, and so on? Impossible!" In this understanding of children, De Morgan is very modern. Master Charles⁶⁹ is the most human baby in all English literature. No children in all fiction ever thought or talked as much like children as do David and Dolly Wardle.⁷⁰

Another noteworthy thing about De Morgan's characters is the fact that they develop. If, as it has been said of Dickens' characters, they always remain the same, this is not true of De Morgan's. They grow: some up and some down. Joseph Vance develops in a very lifelike way; Joey Thorpe degenerates in a most convincing way.⁷¹ Charley Heath appears as two different people.⁷² Janey expands wonderfully under the influence of Joe's love.⁷¹ And yet, altho De Morgan shows us the soul-growth of these characters, except in a few instances,⁷³ he does not give us the tedious minutiae of such analyses, as George Eliot does. She points out too elaborately the relation of thought to action, and she cannot conceive of character except in terms of soul.⁷⁴ How-

⁶⁵*Alice-for-Short.*

⁶⁶*Somehow Good.*

⁶⁷*Joseph Vance.*

⁶⁸*It Never Can Happen Again.*

⁶⁹*The Old Madhouse.*

⁷⁰*When Ghost Meets Ghost.*

⁷¹*Joseph Vance.*

⁷²*Alice-for-Short.*

⁷³See above, pp. 8, 9.

⁷⁴Richard Burton, *Masters of the English Novel*, p. 209.

ever much we may admire the anatomizing of a biologist, he does not show us a human being. De Morgan makes us acquainted with people — so intimately that we could recognize them on the street, just as we do Dickens' all the time. George Eliot exhibits people's characters and souls most wonderfully; but there is more to men and women than characters and souls. We admire her scientific analyses, but we remember De Morgan's people. And, finally, as was stated before, his characters seem the more real and vivid on account of the way he has presented them to us. He does not give us a catalog of their virtues and vices and peculiarities the first time we meet them. We come to know them just as we do people in real life.

De Morgan is very successful with his conversations. At their best, and they are seldom otherwise, they are almost flawless. Admirable as Dickens' and Thackeray's are, they have more of the flavor of the book about them. De Morgan has so developed the art of representing speech that his invariably have the vividness and the naturalness of life itself. George Eliot's people, by comparison, talk like wooden men. And they say so much at one time that it is inconceivable that their hearers would listen to them so long without saying a word. The secret of De Morgan's success is that he records conversation just as people say it — ambiguous, inconsequential, and disjointed, as it is in real life, for, as he himself has said, "Very rarely indeed does a human creature say what it means. Exhaustive definition, lucid statements, concise terminology — even plain English — are foreign to its nature."⁷⁵ This conversation between Sally and Laetitia during their music practice illustrates the disjointed, inconsequential type:

"I like him awfully, you know, Tishy. In fact, I love him. It's a pleasure to hear him come into the house. Only — one's *mother*, you know! It's the oddity of it!"

"Yes, dear. *Now*, are you ready? It is only clickets down because you will *not* screw in; it's no use turning and leaving the key sloppy. . . ."

"I know, Tishy dear — teach your granny! There I think that's right now. But it *is* funny when it's one's mother, isn't it?"⁷⁶

The vocabulary, the emphasis, the lack of coherence, and the individuality, all contribute to its naturalness. De Morgan shows unusual skill in repeating conversation between persons in two different rooms, or in the act of shaving, or in bed at night, or at

⁷⁵*Somehow Good*, p. 353.

⁷⁶*Ibid.*, p. 83.

the table. He gives the natural setting and perspective to their very words. An example of the last in this conversation at Rosalind's table between herself, Sally, and Fenwick. It jumps from one person to the other, just as in life:

"Well, kitten, I suppose you'll go your own way; only I shall be very glad when you're back in your machine. Coffee, Gerry?"

"Yes, coffee — in the big cup with the chip, and lots of milk. You're a dangerous young monkey, Sarah; and I shall get old Benjamin's boat, and hang about. And then you'll be happy, Rosey, eh?"

"No, I shan't! We shall have you getting capsize, too. (I put in three lumps of sugar. . . . No, *not* little ones — big ones!) What a thing it is to be connected with aquatic characters!"⁷⁷

When people talk, they do not use well-rounded, complete sentences. Characters in most books do. De Morgan's, however, are remarkable exceptions. Rosalind, speaking to Fenwick one day, says:

"But then Shakespeare might have gone on and written a dry respectable story — not a love-story; an esteem story — about how Juliet took an interest in Romeo's welfare, and Romeo posted her letters for her, and presented her with a photograph album and so on. And how the families left cards."⁷⁸

The sentence-fragment with which this concludes is very characteristic of De Morgan's mode of representing conversation. That, really, is the way people talk. The whole of this conversation illustrates the spare use of the ordinary machinery of book dialogue — the "he saids" and the "she replieds". It occupies two pages, and yet there occur only one "said Fenwick", one "as Fenwick says", one "she replies", and one "Fenwick repeats". It is De Morgan's principle not to depend on such identifying tags, but to so individualize his people's words that we have no doubt which one is speaking. He has also caught the secret of representing the chatter of several persons talking at once. This he does by throwing their sentences together, with no identification whatever, except the marks of individuality accompanying each speaker's words. When Tishy and the Counter Jumper take their honeymoon at St. Sennans-on-Sea and Sally and her mother first see them, the effect of reality is given to their first words by these conglomerates:

"How did you manage to get it arranged?" "Why *now*? Have you quarrelled with your mother?" "How long can you be away? I hate the stinky honeymoon!" "You've got no things." "Do you think they'll know at home where you are?" "Where are you going afterwards?" "What do

⁷⁷*Somehow Good*, p. 358.

⁷⁸*Ibid.*, p. 240.

you think your father will say?" "What I want to know is, what put it into your head *now*, more than any other time?"⁷⁹

As De Morgan says, "It does not really matter who were the speakers, nor what the share of each was", for in real life people run on in this way, with no one paying any particular attention to what the other is saying.

Another reason why this author's conversations produce the effect of reality is the limited length of each speaker's parts. In a great many books an intimate conversation consists of series of orations, while in actual life only the bore monopolizes the conversation in this way. De Morgan allows his people, however, to speak only a normal amount at a time, and this has a great deal to do with their genuineness. He has given verisimilitude to the conversations, also, by the little individual peculiarities of pronunciation which he sometimes indicates. For instance, Beppino was in the habit of saying "Juvence" for "Joe Vance", and "Tinnyson" for that poet. At one time he had a way of calling Joe "Medea. Fill. Awe" (*my dear fellow*), and at another he pronounced it "Deiphila".⁸⁰ Sally constantly exclaimed "we-e-e-ell",⁸¹ and Mr. Tick was fond of "absoli-yootly".⁸² Uncle Drury always said "charchar" for "'pshaw".⁸³ Many of our author's best conversations occur in the dialect of the slums, of which the tilt between Frederick 'Orkins and Mrs. Groves of Vatted Rum Corners furnishes a good illustration:

"Marcy me, no!" said Mother Groves of the chestnuts when requested by him to 'and over a good un, fair and no cheating. "The riskis lies with the buyers. Where 'ud I be, in half the time, at that rate?"

"Then I'll 'ave the law of yer. Just see if I don't." He danced again, and this time his dance seemed to express confidence in his solicitor. But presently he stopped, and offered a composition: "You lookee here, Missis Groves". he said. "I'll 'and you back the mouldy one, onbit-into and closin' over the busted shell, acrost a clean new un, and I'll take another highp'orth off you, and pay square. If that ain't fair, nothin' ain't! But you got to look sharp, or the chance 'll be gone."

Mother Groves rejected the chance "It ain't consideration enough to go again' the rules on, and me to take my 'ands out in the perishing cold. Make it a penn'orth and pick yourself, all exceptin' the three top."

"Hin't got no penny! Feel in my porket and see. It's open to yer to feel. There hin't no horbstickle. Here's a highp'ny and the bloomin' nut, shell and all. Mike your mind up!"⁸⁴

⁷⁹*Somehow Good*, pp. 332-333.

⁸⁰*Joseph Vance*, p. 340, etc.

⁸¹*Somehow Good*, p. 84, etc.

⁸²*A Likely Story*, p. 249.

⁸³*The Old Madhouse*, p. 4.

⁸⁴*It Never Can Happen Again*, p. 137. Christopher Vance's talk (in *Joseph Vance*) is always admirable.

De Morgan also knows the secret of children's speech. His baby talk is always genuine. The two Joeys in *Joseph Vance*, Alice herself and Peggy's child in *Alice-for-Short*, Lizarann and her little friend in *It Never Can Happen Again*, Miss Gwendolen Arkwright in *Somehow Good*, and Professor Fraser's baby in *The Old Madhouse* are very unartificial and remarkably true to child life.⁸⁵ In all of De Morgan's novels nothing charms us more than David and Dolly talking together in old Mrs. Pictur's room.⁸⁶

But, perhaps, the most realistic conversation in all of De Morgan's works is that short one in *Somehow Good* that the Major held with himself. At least it is the most heartfelt:

"Oh, I pray God there is a hell", came audibly from as kind a heart as ever beat. "How I pray God there is a hell!"⁸⁷

De Morgan, like the Early Victorians, deals with the elemental emotions. He does not follow the modern tendency toward the refinements of feeling and the delicate shades of passion. Love and joy and sorrow and sin and death fill his pages with the scope and intensity characteristic of the Victorians. He agrees much more, however, with modern feeling in the treatment of these emotions. For example, he has a delicacy and reserve of statement that Dickens never knew. The latter has been criticized a great deal of recent years for his excessive display of the feelings, one critic glibly expressing it, "He must have considerably raised the price of pocket handkerchiefs in Britain."⁸⁸ It is well known how the deaths of Little Nell⁸⁹ and Joe⁹⁰ affect us today. It ought to be said for Dickens, however, that whatever may be the effect of his treatment of the emotions upon us, since he appealed to the people of his day, our lack of appreciation of him now must be largely due to the change in popular taste since then. In another generation we may be less heartless than it is the fashion now to be. De Morgan has steered safely past the maudlin and the sentimental. Lizarann's death, tho as pathetic as anything in Dickens, he has depicted very simply and without any "gush":

Miss Fawcett stopped to listen again. "I shall see my Daddy", is all she hears. Yes — Lizarann shall see her Daddy — it's a promise! What is that she's saying now? Be quiet and listen!

⁸⁵Pp. 136-137.

⁸⁶*When Ghost Meets Ghost*, pp. 839-841.

⁸⁷*Somehow Good*, p. 170.

⁸⁸C. F. Horne, *The Technique of the Novel*.

⁸⁹*The Old Curiosity Shop*.

⁹⁰*Great Expectations*. Paul Dombey's death in *Dombey and Son* has been criticized, but it seems natural enough and much superior to Little Nell's and Jo's.

"When I see my Daddy — when I see my Daddy: . . . "

"Yes — darling! What?"

"When I see my Daddy I shall call out, 'Poy-lot!' "91

This seems very close to the beautiful but simple statement of death at Colonel Newcome's end.⁹² Here there is no rhythm, as in Dickens' pathetic scenes, nor do we hear the doleful-comic refrain that sounds when Little Nell has died, and we are waiting for Dickens to bury her. Tho Joe Vance feels deeply, his reference to his dead mother shows reticence and reserve:

I walked home in the moonlight, and thought as my latch-key turned in the door that *I* should not wake my mother.⁹³

At times Dickens expresses the feeling of love, also, with too little restraint. David Copperfield writes thus of the way he felt toward Steerforth:

Yes, Steerforth, long removed from the scenes of this poor history! My sorrow may bear involuntary witness against you at the Judgment throne; but my angry thoughts or my reproaches never will, I know.⁹⁴

This is certainly too oratorical. Equally maudlin is the expression of his love for Dora:

If I may so express it, I was steeped in Dora. I was not merely over head and ears in love with her, but I was saturated through and through. Enough love might have been wrung out of me, metaphorically speaking, to drown anybody in; and yet there would have remained enough within me, and all over me, to pervade my entire existence.⁹⁵

One would hardly write thus now-a-days — especially for publication. In all of De Morgan's novels love is the central theme, and yet nowhere do we find anything like this. Sanity and good taste characterize all of his love scenes. Prosy and Sally's love-making is particularly well done.⁹⁶

De Morgan's humor, in the main, follows that of the Early Victorians. In general, it springs from his extraordinary perception of the humorous in commonplace people. In this he is closely akin to Dickens and Thackeray, yet, close as he is to the former, no one can charge him with caricature. But was Dickens really a caricaturist? He may have made the mistake of emphasizing his characters' humorous qualities too much, but when all has been said, the fact remains that his characters live and we re-

⁹¹ *It Never Can Happen Again*, p. 598.

⁹² Thackeray, *The Newcomes*.

⁹³ Joseph Vance, p. 225.

⁹⁴ *David Copperfield*, chap. xxxii.

⁹⁵ *Ibid.*, chap. xxxiii.

⁹⁶ *Somehow Good*, p. 41. In his *Essays on Modern Novelists*, Professor Phelps disagrees with this statement.

member them.⁹⁷ The impression of their being caricatures may have been caused by the old-fashioned, eccentric pictures that accompany them. Or it may be due to the inability of many respectable people to see the "funny side" of normal people, for all good people are not born with a keen sense of the ridiculous. Be this as it may, in this aspect of his humor, De Morgan follows in the steps of his great predecessor, as the following passages will show:

But this porter's name was Onions, and he had no soul, except one that was wrapped up in remuneration. So he accepted fourpence and saw nothing.⁹⁸

But — where was the Deceased Wife's Sister? Samuel explained. He had shown the lady into the *mezzanina* room, as directed. Samuel felt proud of his Italian over this.⁹⁹

She could keep off people's corns altogether, but she could not go over them on tiptoe.¹⁰⁰

Miss Upwell had her own share of inquisitiveness, and a little of someone else's.¹⁰¹

A good deal of this author's humor, like that of Dickens and Thackeray, depends upon his manner of expression. Sometimes he simply puts things in an unusual, original way:

Tea waited to be made, like Eve when she was a rib.¹⁰²

An up-to-date English servant respects herself more, or less, in proportion to the degree of confusion into which she can plunge her employers when she throws up her situation.¹⁰³

He was just on the point of putting salt on the tail of an unidentified Samnite, or a finishing touch on the demolition of Bopsius.¹⁰⁴

At other times he uses a colloquial or otherwise irregular vocabulary and idiom:

He made himself into a perfect bolster with wraps, and put on a respirator. This damned thing, however, he took off again, as it impeded respiration.¹⁰⁵

Mrs. Groves worked rising indignation into her speech, after the manner of her class. Even so the Choctaw or Cherokee stimulates himself to

⁹⁷"If the creation of differentiated types of humanity who persist in living in the imagination be the cardinal gift of the fiction writer, then this one (Dickens) is easily the leading novelist of the race. Putting aside for the moment his caricaturing tendency, one fact confronts us, hardly to be explained away: we can close our eyes and see Micawber, Mrs. Gamp, Pegotty, Dick Swiveller, the Artful Dodger, Joe Gargery, Tootles, Captain Cuttle, and a hundred more, and their sayings, quaint and dear, are like household companions. And this is true of no other story-maker who has used English speech — it may be doubted if it is true to like degree of Shakespeare himself." Richard Burton, *Masters of the English Novel*, p. 180.

⁹⁸*It Never Can Happen Again*, p. 121.

⁹⁹*Ibid.*, p. 667.

¹⁰⁰*The Old Madhouse*, p. 159.

¹⁰¹*A Likely Story*, p. 243.

¹⁰²*Ibid.*, p. 201.

¹⁰³*It Never Can Happen Again*, p. 456.

¹⁰⁴*Somehow Good*, p. 555.

¹⁰⁵*Ibid.*, p. 258.

battle-point. But Frederick Hawkins remained unmoved. He knew the old woman couldn't ketch holt upon him.¹⁰⁶

She expresses contrition as far as error of judgment, but no great remorse. She told her master — meaning her husband — who said it was a queer start. But it was that early! The exact bearing of this fact on the matter was far from clear.¹⁰⁷

The quoting of a character's speech indirectly in the body of the text also contributes to the humor of our author's work, as in the passages above. But his most characteristic humor is that which he finds in the inconsequential workings of the human mind. Our minds have an illogical, inconsequential way of expressing themselves; we do not always say just what we mean; we take a great deal for granted; our words by themselves are inadequate and deceptive. De Morgan has seized upon this limitation of thought and speech, and with it has developed a species of humor all his own. The following are typical examples:

"My word, missis, he was bad! Wanted to holler me over the coals, he did, for behind my time. I could hear him wantin' to do it. But he couldn't come by the breath."¹⁰⁸

"My dear, you *said* nothing. But if your father could have heard what you did *not* say, you know very well what he would have thought."¹⁰⁹

They were not history, but Scripture, and broadly speaking might be considered to have happened on Sunday.¹¹⁰

Mother Groves's hearing was none of the best; so when she condemned the time-honored legend as outlandish and French, it may be she had really supposed that some of the expressions were in a foreign tongue, any variety of which she would consider French, failing instruction to the contrary. But Lizarann's reference to the Lord, to sinners, and to repentance, was strong enough in itself to keep suspicions of Voltaire and Tom Paine in abeyance. Mrs. Groves therefore allowed the story to continue, and felt fortified against the heresies abounding on the continent by the approved religious bias of the narrator.¹¹¹

As for the pulse, that she could not be certain about. But finding of pulses was not one of her strong points. She had an inner conviction they never occurred twice in the same place.¹¹²

The finest quality in the novels of William De Morgan is their verisimilitude. In obtaining this, he has shown a good deal of independence of his predecessors. It has already been pointed out what assistance he received from them; but he has some more original devices for imparting reality to his stories. As we have

¹⁰⁶*It Never Can Happen Again*, pp. 138-139.

¹⁰⁷*Ibid.*, p. 185.

¹⁰⁸*Somehow Good*, pp. 269-270.

¹⁰⁹*Ibid.*, p. 151.

¹¹⁰*Joseph Vance*, p. 489.

¹¹¹*It Never Can Happen Again*, p. 141.

¹¹²*The Old Madhouse*, p. 179.

already seen, he introduces a character to us by degrees, as we come to know a person in real life. And his characters grow and develop as living people do. Besides this, he has a way of letting the facts in regard to certain occurrences transpire just as in life—in a natural, instead of the usual bookish way. Murder and other things come out gradually.¹¹³ For instance, we do not learn the details of Blind Jim's first accident for some time; we hear them only when Lady Arkroyd goes to see Jim in the hospital and he tells her.¹¹⁴ The proneness of De Morgan's characters to nickname each other, also, adds to the tone of veracity that pervades his books.¹¹⁵ Especially is this true when a character has several pet names, as in the case of Miss Rosalind Nightingale, who has at least four aliases: Sally, Sarah, the kitten, and the merpussy.¹¹⁶ Verisimilitude frequently arises, also, from the inconsequential talk of the characters:

"There, now! you're being imperturbable! I knew you would. But you may say what you like — there really was nothing in it. Nothing whatever that time! However, of course Mother does like Mr. Fenwick very much — everybody knows that."

Laetitia says time will show, and Sally says, "Show what?" For the remark connects with nothing in the conversation.¹¹⁷

De Morgan procures the effect of reality by the simplest touches. In talking to the reader, he assumes a genial, intimate tone, just as Thackeray did; he mentions insignificant objects that are a part of the scene or circumstance, as the unhappy kitten in the Major's lap,¹¹⁸ the fly in Mrs. Challis' ink,¹¹⁹ the perennial bluebottle fly between the blind and the window-pane while Sally eats her breakfast,¹²⁰ and the safety-pin that she could not find;¹²¹ he casually refers to people who really have nothing to do with the story;¹²² he recalls some antecedent circumstance that gives naturalness to a later occurrence, as Sally's going into the house to direct a letter for Fenwick to mail;¹²³ he speaks of a character as if he existed in actual life outside of the book;¹²⁴ and

¹¹³Sometimes the reader is never informed exactly what the facts were; for example, the exact nature of the crime that darkened Rosalind's life is never told, though there are references to it again and again (*Somehow Good*, pp. 120, 132, 133, 177, 495).

¹¹⁴These indefinite references add very much to the verisimilitude of the crime. *It Never Can Happen Again*, p. 214. This was really Jim's second accident.

¹¹⁵*Somehow Good*.

¹¹⁶De Morgan is like Dickens when he gives his characters what may be called generic names: as, the Fossil, the Dragon, the Goody (*Somehow Good*), and Nosey and Elbows (*The Old Madhouse*).

¹¹⁷*Somehow Good*, p. 85.

¹¹⁸*Ibid.*, p. 170.

¹¹⁹*It Never Can Happen Again*, p. 358.

¹²⁰*Somehow Good*, p. 179.

¹²¹*Ibid.*, p. 521.

¹²²*It Never Can Happen Again*, pp. 377, 513.

¹²³*Somehow Good*, p. 88.

¹²⁴*Ibid.*, p. 561.

in connection with reminiscences out of a distant past, he recollects some antecedent circumstance of insignificant character that gives the tone of reality to the more important circumstance, as Joseph Vance's remembering on the night after his father's fight with Peter Gunn, "I lay still and sucked my nightgown, of which I can distinctly recollect the flavor to this day."¹²⁵

But the most original source of this novelist's verisimilitude is the unusual, unconventional diction that he frequently employs. In this way he secures a remarkable degree of reality. For example, he employs colloquial words and forms of expression, as we have already seen — the actual speech of his characters — for which he never apologizes with either quotation marks or italics:

The rostrum happened to be a hassock on the hearthrug, before the little bit of fire that wasn't at all unwelcome, because September had set in quite cold already, and there was certain to be a warm Christmas if it went on like this, and it would be unhealthy.¹²⁶

Not only does he use the colloquial words of polite society, but he utilizes even the vocabulary and idiom of the illiterate. In referring to Mr. Salter's oath to twist off his wife's nose, he thus expresses himself:

The result seemed likely to turn on whether the victim's back hair would endure the tension as a fulcrum, or would come rippin' out like so much grorse.¹²⁷

He employs these uncouth expressions particularly when he represents talk indirectly; for example:

Tallock Street would have replied, forcibly as we think, that it warn't messin' about with any blooming reasonings — only turning of it over like. . . . Her mourning gownd was that respectable to look at you couldn't 'ardly tell her for Mrs. Steptoe, goin' along the street, or in at the butcher's.¹²⁸

When he needs a word that is not found in the dictionary, he manufactures it on the analogy of a word that is; for example, *Sundane*,¹²⁹ *Squirophant*,¹³⁰ *Genteelologist*,¹³¹ *ungrundied*,¹³² *sobriometer*,¹³³ *I-told-you-soing*,¹³⁴ and others. He constructs his sentences, also, whenever he pleases, just as people talk:

¹²⁵Joseph Vance, p. 11.

¹²⁶*Somehow Good*, pp. 203-204.

¹²⁷*Ibid.*, p. 4.

¹²⁸*It Never Can Happen Again*, p. 231. E. Temple Thurston, in his *City of Beautiful Nonsense*, seems to be imitating this method of De Morgan's.

¹²⁹*Somehow Good*, p. 181.

¹³⁰*Ibid.*, p. 312.

¹³¹*Ibid.*, p. 230.

¹³²*It Never Can Happen Again*, p. 282.

¹³³*A Likely Story*, p. 258.

¹³⁴*The Old Madhouse*, p. 435.

Only Tisha's teeth never could get as big as that! Nor wiggle.¹³⁵

Ever since, the sea had broken over it at high tides, and if you cared at all about your clothes you wouldn't go to the end of it, if you were me. Because the salt gets into them and spoils the dye. Besides, you have to change everything.¹³⁶

So he sat down to think where the dooce that box had got put.¹³⁷

This method of De Morgan's adds most unmistakably an atmosphere of reality to his stories. It has laid him liable, however, to the charge of lacking art and has brought a good deal of adverse criticism against his novels. Lady Cecil has condemned him very emphatically on this account:

For agreed as we are that Mr. De Morgan's success is deserved, we are yet more agreed that his deserved success has had very little to do with art. Mr. De Morgan is like a stranger who has safely traversed a difficult and hostile country provided with neither guide nor safe conduct. He has been congratulated on his feat, but official dignity has hastened to point out that, strictly speaking he ought to have perished by the way. . . . There remains Mr. De Morgan's style, which to tell the truth, has shocked us not a little. If to express your thought in the form of common speech is to be heretical against art, then Mr. De Morgan is hopelessly heretical. . . . But the means of transmission, if it is to be admitted as style at all, is certainly an undressed style. It is not a style for Sundays nor for the library. The tool is excellently fitted to its purpose and to the workman's hand, but is was never forged in any workshop of art.¹³⁸

To Lady Cecil it should be answered that, instead of this method of De Morgan's being inartistic, it really is the highest form of art. What constitutes the artistic and the inartistic? Is not an author artistic or inartistic according to the degree that he produces artistic results? Real art has never been confined to hide-bound rules of style. The test of art is this — does the work produce the impression of real life? Now, this is exactly the effect that DeMorgan's novels do produce. As we have seen, this method has allowed him greater freedom for the play of his humor; it has brought him closer to his readers; but more than anything else, it has enabled him to produce some charming stories with the highest degree of verisimilitude to which the English novel has yet attained. And he has failed only when, heeding, perhaps, such criticism as Lady Cecil's, he has departed from this style of writing.¹³⁹ Is it possible that a "tool excellently fitted to its purpose", when that purpose is the representation of life, cannot have been "forged in any workshop of art"? One would think

¹³⁵ *Somehow Good*, p. 154.

¹³⁶ *Ibid.*, p. 385.

¹³⁷ *A Likely Story*, p. 250.

¹³⁸ Lady Eleanor Cecil, *Living Age*, May 30, 1908, pp. 567-570.

¹³⁹ This De Morgan has done in *An Affair of Dishonor*, which is not comparable with his other works.

that the canon of the artistic had been closed a long time ago — instead of always being in a state of development and subject to revision thruout the ages yet to be. As Chesterton has said, "The hardest thing to remember about our time, of course, is simply that it is a time; we all instinctively think of it as the Day of Judgment."¹⁴⁰ De Morgan has produced artistic effects if realistic effects are artistic effects, if reality is great art, and therefore the limits of art will have to be extended to include his works.

To call William De Morgan a "belated Early Victorian" is a blunder. It is true, as we have seen, that he has followed the general methods of the Victorians, especially Dickens. In the length of his books, their leisurely, discursive style, the labels on his chapters, his somewhat improbable, badly constructed plots, which are always subordinated to the characterization, his large number of characters, certain qualities of his humor, and his epic rather than impressionistic view of life, he has maintained the Victorian tradition. But, as we have also seen, he has carried the novel considerably beyond the development that the Victorians have given it. Altho he has asides somewhat like Thackeray's and George Eliot's, he is not snobbish or cynical, as Thackeray is said to be, and he does not talk so heavily or preach so seriously as George Eliot. He analyzes actions and motives in certain respects like her, but he does not go to the extremes that she does. Closely as he has followed Dickens, he has avoided caricature, he has created characters that have complex natures and that develop, and he has expressed the emotions with reserve and restraint. As compared with these Victorians, he has made his novels shorter; he has eliminated all lengthy objective descriptions of people and places, especially those of nature; he has created men and women and boys and girls of all classes; he has considerably developed the representation of conversation; he has elevated the quality of humor beyond that of the Victorians; he has put into his works the social, intellectual, and ethical spirit of the present day; he has disregarded the conventional vocabulary and idiom, and has set a new style for the realistic novel; and he has given the English novel the highest degree of verisimilitude that it has ever attained.

If it be granted that to this extent De Morgan has developed and modernized the Victorian novel, how shall we estimate him as a novelist? Certainly, he is not entirely a Victorian; for will not all agree that, instead of borrowing from his great predecessors

¹⁴⁰G. K. Chesterton, *Charles Dickens, A Critical Study*, p. 291.

and copying them directly, he has availed himself of their method and spirit? However much the Early Victorians overdid and exaggerated certain tendencies in their novels, surely they had the right principles. They put the emphasis upon characterization; they believed in the full value of humor; and they aimed at a realization of life in its fulness. True it is that they overdid most of what they tried to do, but the abuse of their principles does not invalidate them. It is the soundness of these principles, in spite of the way that they exaggerated them, that keeps their works alive today. And, no doubt, because he realized that the Early Victorians came closest to the true expression of life, De Morgan has followed their principles. He himself has confessed, "Dickens was my idol in childhood, boyhood, youthhood, manhood, and so on, to a decade of senility — even until now."¹⁴¹ It must be borne in mind, however, that in following in the steps of Dickens and the other Early Victorians, he imitated the spirit and not the letter of their great novels, for he is always more than Victorian. And yet there is no greater praise than to call him Victorian.

¹⁴¹De Morgan wrote these words on the margin of a copy of *The Yale Courant* (June, 1909), sent to him by Henry Dennis Hammond, which contains the latter's prize essay, *The Novels of William De Morgan*.

INDIANA UNIVERSITY STUDIES



Study No. 51

**REPORT OF THE DEAN OF THE GRADUATE SCHOOL,
INDIANA UNIVERSITY**

The INDIANA UNIVERSITY STUDIES are intended to furnish a means for publishing some of the contributions to knowledge made by instructors and advanced students of the University. The STUDIES are continuously numbered; each number is paged independently.

Entered as second-class matter, June 14, 1918, at the post-office at Bloomington, Ind., under the act of August 24, 1912. The INDIANA UNIVERSITY STUDIES are published four times a year, in March, June, September, and December, by Indiana University, from the University Office, Bloomington, Ind.

INDIANA UNIVERSITY STUDIES }
VOL. VIII }

DECEMBER, 1921

Study No. 51

REPORT OF THE DEAN OF THE GRADUATE SCHOOL,
INDIANA UNIVERSITY

Report of the Dean of the Graduate School, 1921

I. SOME STATISTICS TO SHOW THE CONDITION OF THE GRADUATE SCHOOL IMMEDIATELY BEFORE, DURING, AND SINCE THE WAR

NUMBER OF STUDENTS (SEE TABLE 1)

THE average number of students in attendance during a year between June, 1911, and June, 1917, was 195. The largest number in attendance for any one year was between June, 1916, and June, 1917. There were 230 different individuals enrolled during this year, and the average attendance for the summer and two semesters was 118 minus. There was a distinct decrease in the attendance during the following year, 1917-18. The decrease was progressive; the decrease for the summer term was 18 per cent from the preceding summer. The decrease for the fall semester was 31 per cent, and for the spring semester, 41 per cent (from the fall and spring semesters of 1916-17). The decrease continued to the following year, being 23 per cent, nearly 60 per cent, and nearly 40 per cent for the summer and the two semesters respectively. The greatest drop was for the fall semester. There was evidence of a slackening of the descent in the spring semester.

TABLE 1—THE NUMBER OF STUDENTS BY TERMS ENROLLED IN THE GRADUATE SCHOOL SINCE 1911

	1911 -12	1912 -13	1913 -14	1914 -15	1915 -16	1916 -17	1917 -18	1918 -19	1919 -20	1920 -21
Summer ..	90	104	82	121	98	138	113	87	79	138
Fall or 1st Semester ...	64	72	74	93	91	112	77	31	52	59
Winter ...	66	71	79	103				36		
Spring or 2d Semester	71	70	67	108	99	106	62	38	47	74
Number of Women.....	45	58	61	68	54	84	87	71	70	84
Number of Men.....	132	131	108	148	138	146	99	71	65	130
Totals....	177	189	169	216	192	230	186	142	135	214

The summer session of 1919 showed a further decrease from the preceding summer, but the fall and spring semesters showed a recovery from the preceding slump.

The summer of 1920 showed a complete recovery from war conditions to the maximum pre-war numbers. The fall and spring semesters showed further recoveries but not to the pre-war maximum.

The effect of the war on the attendance of men is shown by the following:

1. Actual Number. The average number of men in attendance during an entire school year, between June, 1911, and June, 1917, was 134. The average for the last three of these years was 144. During 1916-17 the attendance of men was 146. From this, the descent was rapid to 99, 71, and 65, during the years 1917-20.

The summer of 1920 showed a distinct recovery, there being 88 men registered for the one session as against the 65 for the entire preceding year.

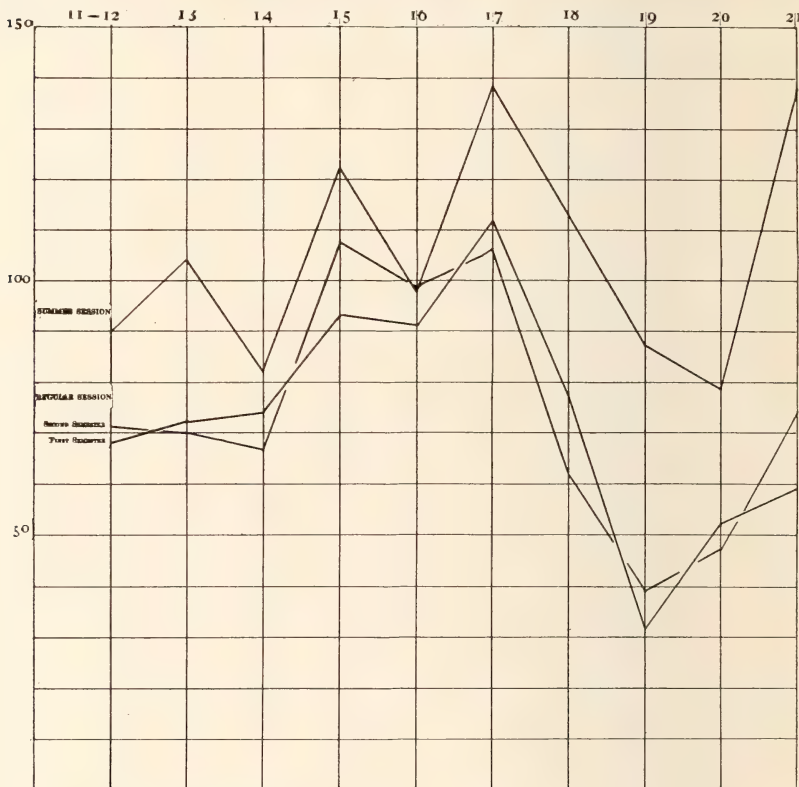


Chart 1 shows the actual attendance per semester.

2. Relative Number. In 1911-12, 74 per cent of the students were men. In the year 1915-16, 72 per cent of the students enrolled were men. With the decrease in the total number of students between 1916 and 1920 the per cent of men in the total enrollment of the year fell to 47 per cent. With an increase in the number of students during the current year of 1920-21, there is also an increase in the per cent of men.

The number of women in attendance has fluctuated much less than the number of men. The average number of women in attendance between June, 1911, and June, 1917, was 61. The maximum number of women in attendance was between June, 1917, and June, 1918, during the worst part of the war. While the number has been less during 1918-20, nevertheless

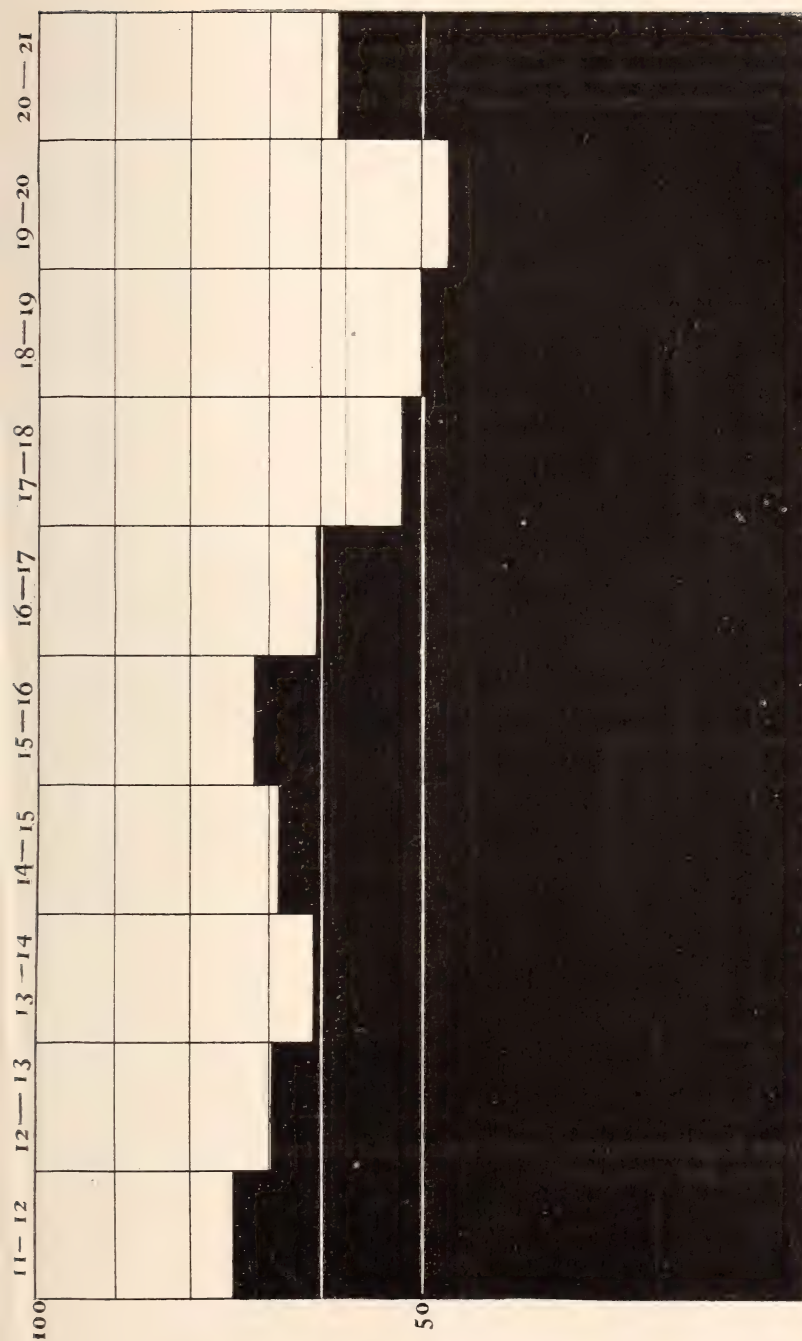


Chart 2 shows the ratio of men and women in per cents during the same time.

it has been about 16 per cent above the average before the war. The war had little effect on the actual number of women in residence, but by causing a decrease in the number of men it had a great effect in temporarily changing the ratio between men and women in the Graduate School.

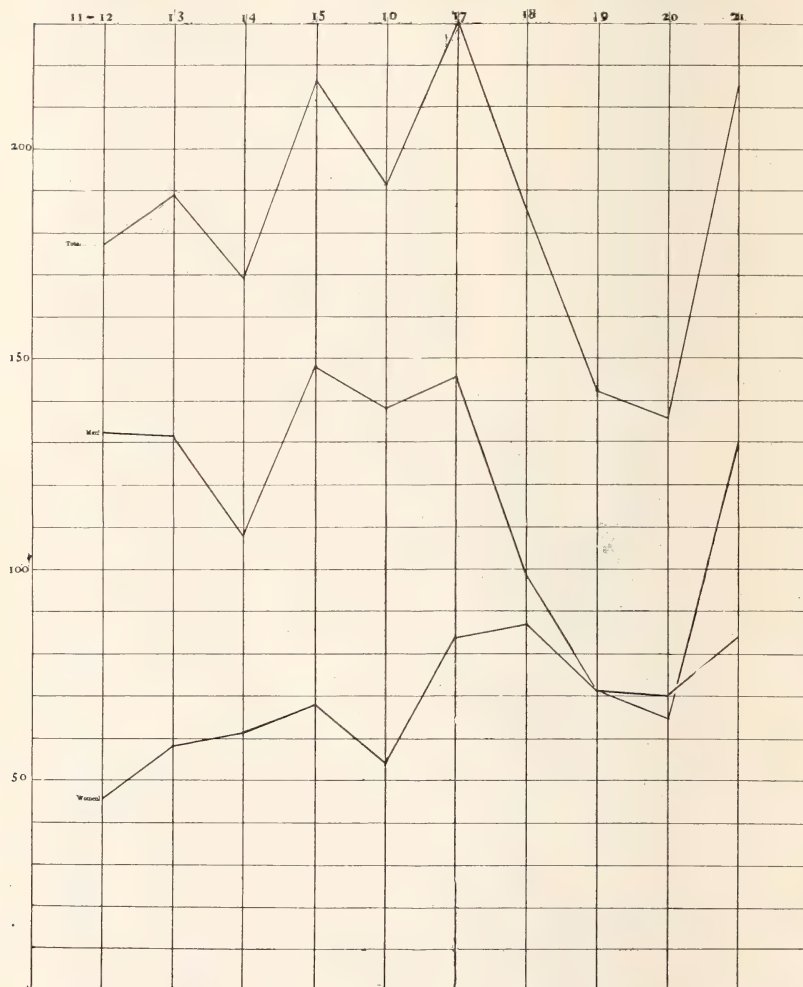


Chart 3, attendance of men and women and the total attendance between June, 1911, and June, 1920.

THE MASTER OF ARTS DEGREE

Between 1908 and 1920 the degree Master of Arts has been conferred on 164 women and 399 men, a total of 563 with an average ratio of 2.4 + men to each woman. The date and the major subject of these is indicated by Table 2.

TABLE 2—THE NUMBER OF M.A. AND M.S. DEGREES CONFERRED SINCE JANUARY, 1908, BY DEPARTMENTS ARRANGED ACCORDING TO THE TOTAL NUMBER OF DEGREES CONFERRED

	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	Total
1. English.....	7	3	5	3	6	10	3	15	15	16	7	12	4	106
2. Education.....	2	3	12	4	8	10	5	6	7	7	2	5	6	77
3. Chemistry.....	2	2	2	4	8	7	3	11	6	2	2	1	6	56
4. History.....	4	4	3	2	4	4	4	7	7	5	6	4	2	56
5. Mathematics.....	4	4	4	5	1	7	3	2	5	1	1	1	1	37
6. Latin.....	2	2	2	2	4	1	4	5	2	1	3	1	1	28
7. Physics.....	1	1	3	4	4	2	1	2	1	3	2	2	2	26
8. Philosophy.....	2	1	4	3	3	2	1	2	3	1	1	3	3	25
9. Zoology.....	2	2	3	1	4	1	2	4	1	3	1	1	1	24
10. Economics and Sociology.....	1	1	2	3	1	1	5	2	1	4	1	1	1	23
11. German.....	2	1	2	1	1	5	3	3	2	1	1	1	1	19
12. Botany.....	1	2	1	1	1	3	2	3	1	3	1	1	1	17
13. Geology.....	1	3	2	2	2	2	5	3	1	1	1	1	1	15
14. Physiology.....	1	1	1	1	2	1	1	1	1	2	1	1	1	8
15. Political Science.....	1	1	1	1	2	1	1	2	2	1	2	1	1	8
16. Social Service.....	1	1	1	1	1	1	1	1	2	1	1	2	3	8
17. Anatomy.....	1	1	1	1	1	1	1	1	2	1	1	1	1	7
18. Romance Languages.....	1	1	1	1	1	1	4	1	1	1	1	1	1	7
19. Pathology.....	1	1	1	1	1	1	1	1	1	1*	1	1	1	5
20. Journalism.....	1	1	1	1	1	1	1	1	1	1	1	1	1	3
21. Comparative Philology.....	1	1	1	1	1	1	1	1	1	1	1	1	1	2
22. Experimental Surgery.....	1	1	1	1	1	1	2	1	1	1	1	1	1	2
23. Greek.....	1	1	1	1	1	1	1	1	1	1	1	1	1	2
24. Astronomy.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25. Fine Arts.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total.....	32	29	45	35	50	56	49	71	55	53	28	29	31	563
Men.....	24	23	37	28	37	42	34	54	38	33	14	13	22	399
Women.....	8	6	8	7	13	14	15	17	17	20	14	16	9	164
Ratio Women to Men.....	1:3	1:3.83	1:4.62	1:4	1:2.84	1:3	1:2.8	1:3.2	1:2.23	1:1.65	1:1	1:1.81	1:2.44	

*Master of Science.

Sex Ratio among the Masters of Arts. The ratio of men to women among the persons on whom the A.M. degree has been conferred changed materially during the war. There were from 2.8 to 4.6 men to one woman among those receiving the degree Master of Arts, between 1908 and 1915. Between 1916 and 1919 the ratio dropped rapidly.

In 1918 the number of men and women was equal and in 1919 there were more women than men. Among the persons on whom the degree was conferred in June and October, 1920, the ratio was 2.44 men to each woman, nearly the average ratio. The increase in the ratios of men to women in 1920 was due in part to an increase in men and in part to a decrease in the number of women candidates for the degree. There were fewer women candidates than at any time since 1911.

Per Cent of Men and Women among the Persons receiving the A.M. Degree since January, 1908, by Departments. The total number of persons receiving

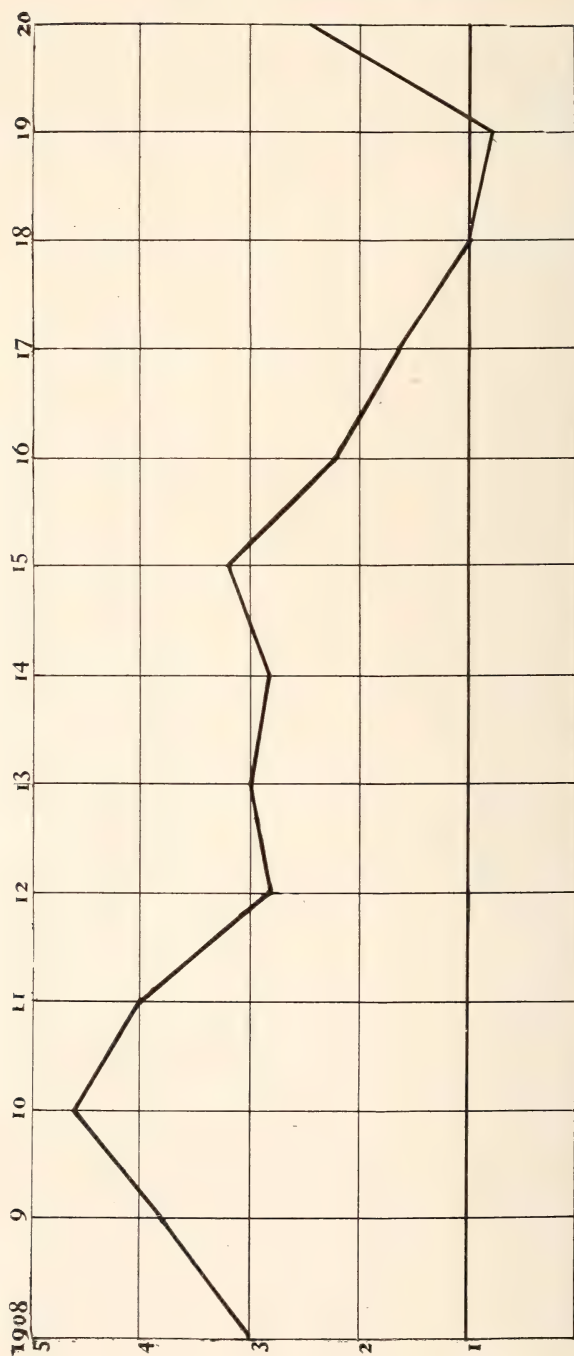


Chart 4, the ratio of men to each woman (the horizontal line at 1) on whom the degree Master of Arts has been conferred since 1908

the A.M. degree since January, 1908, being 563, of whom 399 are men and 164 women, the per cents of men and women are nearly 70.8 per cent and 29.2 per cent. For the departments, this ratio of the sexes among the persons who received the degree A.M. obtains only in Botany.

In nine of the departments 100 per cent of those receiving the A.M. degree are men. The ratio of men to women as given below is of value in proportion to the number of individuals concerned. Evidently the ratio given means nothing for Astronomy, Fine Arts, and Surgery, where only one or two persons are concerned. It is distinctly significant for Economics, Physics, Chemistry, Education, Mathematics, History, English, and Latin.

The departments in which 100 per cent of the persons on whom the A.M. degree was conferred are men are: Anatomy, Astronomy, Economics, Fine Arts, Pathology, Political Science, Physics, Physiology, and Surgery.

The departments in which from 90 to 95 per cent of the persons on whom the degree A.M. was conferred are men are: Chemistry, Geology, Education, and Philosophy.

The departments in which from 66 to 80 per cent of the persons on whom the degree A.M. was conferred are men are: Zoölogy, History, Botany, and Journalism.

The departments in which from 40 to 50 per cent of the persons on whom the degree was conferred are men are: Comparative Philology, Greek, Psychology, and Sociology.

In the departments of German and English, about one-third of the persons on whom the degree was conferred were men.

In Latin, about 21 per cent; in Romance Languages, 16 per cent.

One hundred per cent of the persons on whom the A.M. degree was conferred for work in Social Service were women.

THE DOCTORATE IN PHILOSOPHY

The Graduate School was organized in 1904, and the advanced degree of Ph.D. was given for the first time, after a lapse of years, in 1908. Since then, the degree Ph.D. has been conferred on 12 women and 31 men, a total of 43 from the departments and on the date indicated in Table 5.

The maximum number conferred at any one time was in June, 1915. The maximum conferred by any one department was 7; 13 departments have been represented by one or more candidates.

The number of persons carrying on more advanced work in the various departments is not proportionate to the number doing first-year work. This may be seen by comparing the numbers of doctorates conferred by the various departments with the number of Masters' degrees conferred from the same departments, Tables 2 and 3.

TABLE 3—THE NUMBER OF PH.D. DEGREES CONFERRED SINCE 1900

	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	Total
Astronomy.....	..	2	..	..	..	..	..	..	..	..	..	..	..	2
Botany.....	..	1	..	..	2	..	..	1	..	1	1	..	..	6
English.....	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Geology.....	..	..	..	..	..	1	..	2	2	..	1	1	..	7
German.....	..	..	..	..	..	..	..	1	..	..	..	..	..	1
History.....	..	..	..	..	..	2	1	..	..	..	..	..	..	3
Mathematics..	..	..	..	..	1	..	1	..	..	1	2	..	..	5
Physics.....	..	..	..	..	..	..	..	1	1	..	..	..	..	2
Physiology....	1	..	..	..	..	..	1	..	..	..	..	..	1	3
Political Science.....	..	..	..	..	..	..	..	1	1	..	..	..	..	2
Psychology....	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Sociology.....	..	..	..	..	..	..	..	..	..	2	..	..	..	2
Zoölogy.....	2	..	..	2	1	..	..	..	..	..	..	..	2	7
No. of Women..	1	0	0	0	3	0	1	0	0	3	2	0	2	12
No. of Men....	2	3	0	2	1	3	3	6	4	1	2	1	3	31
Totals.....	3	3	0	2	4	3	4	6	4	4	4	1	5	43

SOURCE OF THE GRADUATE STUDENTS

The per cent of students receiving the Master of Arts degree, who received their first degree in other institutions, has increased with the years.

From 1908 to 1911, the per cent was 12.5.

From 1912 to 1914, it was 20.

Between 1915 and 1917 it was 29.5.

Between 1918 and 1920 it was 36.3.

In 1918 half of the students receiving the Master's degree had received their A.B. from Indiana University, the other half from other institutions.

The following institutions have contributed the respective number of graduate students on whom Indiana University has conferred the degree Master of Arts, since January, 1908. All others received their A.B. or B.S. degree from Indiana University.

Beloit College, Beloit, Wis.	1
Bridgewater College, Bridgewater, Va.	2
Brown University, Providence, R.I.	1
Butler College, Irvington, Ind.	15
Colgate University, Hamilton, N.Y.	1
Columbia University, New York City, N.Y.	1
Cornell University, Ithaca, N.Y.	2
DePauw University, Greencastle, Ind.	10
Earlham College, Richmond, Ind.	9
Franklin College, Franklin, Ind.	4
Goshen College, Goshen, Ind.	7
Hanover College, Hanover, Ind.	7
Hillsdale College, Hillsdale, Mich.	1
Illinois College, Jacksonville, Ill.	1
Indiana Central University, Indianapolis, Ind.	3
Indiana State Normal School, Terre Haute, Ind.	8
Kentucky State Agricultural and Technical College.	1
Knox College, Galesburg, Ill.	2
Kwansei Gakuin College, Kobe, Japan.	1
Leland Stanford Junior University, Stanford University, Calif.	1
Meiji University, Tokio, Japan.	1
Mississippi Agricultural College, Agricultural College, Miss.	1
Moore's Hill College (now transferred to), Evansville, Ind.	3
Mühlenberg College, Allentown, Pa.	1
Notre Dame University, Notre Dame, Ind.	2
Oakland City College, Oakland City, Ind.	1
Ohio Wesleyan, Delaware, Ohio.	4
Olivet College, Olivet, Mich.	1
Roanoke College, Salem, Va.	1
St. Beda College, St. Thomas University, Manila, P.I.	1
Swarthmore College, Swarthmore, Pa.	1
Tri-State Normal College, Angola, Ind.	2
Union Christian College, Merom, Ind.	1
University of Chicago, Chicago, Ill.	2
University of Michigan, Ann Arbor, Mich.	2
University of Toronto, Toronto, Canada.	1
University of Waseda, Tokyo, Japan.	1
Valparaiso University, Valparaiso, Ind.	11
Vanderbilt University, Nashville, Tenn.	1
Vassar College, Poughkeepsie, N.Y.	1
Vincennes University, Vincennes, Ind.	1
Wabash College, Crawfordsville, Ind.	5
Wellesley College, Wellesley, Mass.	1
Wesleyan University, Middletown, Conn.	1
Western College for Women, Oxford, Ohio.	1
Wilmington College, Wilmington, Ohio.	2
Wilson College, Chambersburg, Penn.	2
Wisconsin University, Madison, Wis.	2

II. A LIST OF PERSONS ON WHOM THE DEGREE OF DOCTOR OF PHILOSOPHY HAS BEEN CONFERRED BETWEEN 1908 AND 1920

The major subject is given in heavy-faced type.

ALLEN, WILLIAM RAY.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1920.

Zoölogy. Thesis: Studies of the biology of freshwater mussels. Biol. Bull., XL, pp. 210-241. 1921.

BLACK, CAROLINE ANNA.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1912.

Botany. Thesis: The morphology of *Riccia frostii* Aust. Ann. Bot., XXVII, pp. 511-532, plates XXXVII-XXXVIII. 1913.

BROWNFIELD, LILLIAN BEESON.

A.B., DePauw University, 1895; A.M., Ohio Wesleyan University, 1904; Ph.D., Indiana University, 1914.

English. Thesis: Studies in the thought of Addison, Johnson, Burke.

BYBEE, HALBERT PLEASANT.

A.B., Indiana University, 1912; A.M., 1913; Ph.D., 1915.

Geology. Thesis: The flood of 1913 in the lower White River region of Indiana. Ind. Univ. Studies, No. 22, pp. 105-223. 1914.

DANTZIG, TOBIAS.

Licencié ès Sciences Mathématiques, University of Paris, 1910; Ph.D., Indiana University, 1917.

Mathematics. Thesis: Contributions to the general theory of plane transformations.

DUTCHER, JOHN BENJAMIN.

A.B., Indiana University, 1906; A.M., 1907; Ph.D., 1915.

Physics. Thesis: The nature of the explosion valve in an electrolytic gas.

EDMONDSON, CLARENCE EDMUND.

A.B., Indiana University, 1906; A.M., 1912; Ph.D., 1914.

Physiology. Thesis: The effects of thyroid and thymus extract upon the growth and reproduction in *Paramecium caudatum*.

EDMONDSON, (MRS.) EDNA ELDER HATFIELD.

A.B., Indiana University, 1911; A.M., 1914; Ph.D., 1917.

Sociology. Thesis: Certain associations of crime in the population of Gary, Indiana. Ind. Univ. Studies, No. 49. 1921.

ELLIS, MAX MAPES.

A.B., Indiana University, 1907; A.M., 1908; Ph.D., 1911.

Zoölogy. Thesis: The Gymnotid eels. Mem. Carnegie Mus., V, pp. 109-195, plates 15-23. 1913.

ESAREY, LOGAN.

A.B., Indiana University, 1905; A.M., 1909; Ph.D., 1913.

History. Thesis: Internal improvement in early Indiana. Ind. Hist. Soc. Publ., V, pp. 40-158. 1912.

GALLOWAY, JESSE JAMES.

A.B., Indiana University, 1909; A.M., 1911; Ph.D., 1913.

Geology. Thesis: The stratigraphy and paleontology of the Tanner's creek section of the Cincinnati series of Indiana. 37th Ann. Rep. Geol. and Nat. Res. Ind., pp. 353-478, 18 figures, 20 plates, 2 sections, 1 profile and map. 1913.

GOLDSMITH, WILLIAM MARION.

B.Pe., Missouri State Normal, 1909; A.B., Hillsdale College, 1913; A.M., Indiana University, 1915; Ph.D., 1920.

Zoölogy. Thesis: A comparative study of the chromosomes of the tiger beetles (Cincidelidae). Jour. Morph., XXII, pp. 437-488, 9 plates. 1919.

HAHN, WALTER LOUIS.

A.B., Indiana University, 1905; A.M., 1907; Ph.D., 1908.

Zoölogy. Thesis: The habits and reactions of the cave bats. Biol. Bull., XVIII, 135-193. 1908.

HANSFORD, HAZEL IRENE.

A.B., Indiana University, 1913; Ph.D., 1920.

Psychology. Thesis: The Slack family—a mental and social survey of a degenerate family.

HARMAN, MARY THERESA.

A.B., Indiana University, 1907; A.M., 1909; Ph.D., 1912.

Zoölogy. Thesis: Method of cell division in the sex cells of *Taenia teniaeformis*. Jour. Morph., XXIV, pp. 205-243, 8 plates. 1913.

HARMON, PAUL MONTGOMERY.

A.B., Indiana University, 1914; A.M., 1915; Ph.D., 1920.

Physiology. Thesis: The influence of temperature and other factors upon the summited contraction curve of the gastronemius muscles of the frog.

HENNEL, CORA BARBARA.

A.B., Indiana University, 1907; A.M., 1908; Ph.D., 1912.

Mathematics. Thesis: Certain transformations and invariants connected with difference equations and other functional equations. Am. Jour. Math., XXXIV, pp. 431-452. 1913.

HENRY, EDNA GERTRUDE.

A.B., Indiana University, 1897; A.M., 1914; Ph.D., 1917.

Sociology. Thesis: The theory and practice of medical social service.

HOWARD, WILLIAM EDGAR.

B.S., Northwestern University, 1899; A.M., 1899; Ph.D., Indiana University, 1909.

Astronomy. Thesis: The annual parallax of light stars. Ind. Univ. Studies, No. 14, pp. 173-214. 1912.

HUFFORD, MASON EDWARD.

A.B., Indiana University, 1911; A.M., 1912; Ph.D., 1916.

Physics. Thesis: The diffraction-ring system in the shadow of a circular object. Phys. Rev., Ser. II, VII, pp. 544-551. 1916.

JACKSON, DENNIS EMERSON.

A.B., Indiana University, 1905; A.M., 1906; Ph.D., 1908.

Physiology. Thesis: The prolonged existence of adrenalin in the blood. *Am. Jour. Physiol.*, XXIII, pp. 226-245. 1909.

JACKSON, THOMAS FRANKLIN.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1916.

Geology. Thesis: The description and stratigraphic relationships of fossil plants from the lower Pennsylvanian rocks of Indiana. *Proc. Ind. Acad. Sci.* for 1916, pp. 405-439. 1917.

KETTLEBOROUGH, CHARLES.

A.B., Indiana University, 1904; A.M., 1908; Ph.D., 1916.

Political Science. Thesis: Constitution making in Indiana: a compilation of documents, with introduction and notes.

LEWIS, ISAAC MCKINNEY.

A.B., Indiana University, 1906; A.M., 1907; Ph.D., 1909.

Botany. Thesis: The chromosomes in *Pinus* and *Thuja*. *Ann. Bot.*, XXII, pp. 529-556, plate. 1909.

LINTON, ERNEST MARSHALL.

A.B., Butler College, 1911; A.M., Indiana University, 1912; Ph.D., 1915.

Political Science. Thesis: Belgian neutrality.

MALOTT, CLYDE ARNETT.

A.B., Indiana University, 1913; A.M., 1915; Ph.D., 1919.

Geology. Thesis: The "American Bottoms" region of eastern Greene county, Indiana—a type unit in southern Indiana physiography. *Ind. Univ. Studies*, No. 40, pp. 61. 1919.

MANCE, GROVER CLEVELAND.

A.B., Colgate University, 1906; A.M., Indiana University, 1914; Ph.D., 1915.

Geology. Thesis: The power economy and the utilization of waste in the quarry industry of Indiana. *Ind. Univ. Studies*, No. 35, pp. 204. 1917.

MASON, THOMAS EDWARD.

A.B., Indiana University, 1905; A.M., 1912; Ph.D., 1914.

Mathematics. Thesis: Character of the solution of certain functional equations. *Jour. Math.*, XXXVI, pp. 419-440. 1914.

MCCAIN, GERTRUDE IONA.

A.B., Indiana University, 1908; A.M., 1911; Ph.D., 1919.

Mathematics. Thesis: Series of iterated linear fractional functions: character of the functions: asymptotic representation.

McEWAN, (MRS.) EULA DAVIS.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1918.

Geology. Thesis: A study of the Brachiopod genus *Platystrophia*. *Proc. U.S. Nat. Mus.*, LVI, pp. 383-448, 10 plates. 1919.

MUHSE, (MRS.) EFFA FUNK.

A.B., Indiana University, 1903; A.M., 1907; Ph.D., 1908.

Zoölogy. Thesis: The cutaneous glands of the toad. Jour. Anat., IX, pp. 321-360, 7 plates. 1909.

PICKETT, FERREN LAYTON.

A.B., Indiana University, 1910; A.M., Harvard University, 1913; Ph.D., Indiana University, 1915.

Botany. Thesis: *Arisaema triphyllum*: a biological study. Bull. Torr. Bot. Club, XL, pp. 229-235. 1913.

PRESSEY, (MRS.) LUELLA WINIFRED.

A.B., Vassar College, 1916; A.M., Indiana University, 1919; Ph.D., 1920.

Psychology. Thesis: The measurement of intelligence and school attainment in the first three school grades.

SCOTT, WILL.

A.B. and A.M., Indiana University, 1908; Ph.D., 1911.

Zoölogy. Thesis: The fauna of a solution pond. Proc. Ind. Acad. Sci. for 1910, pp. 395-440. 1911.

SHERWOOD, HENRY NOBLE.

A.B., Indiana University, 1909; A.M., Harvard University, 1910; Ph.D., Indiana University, 1914.

History. Thesis: Studies in negro deportation.

SHOCKLEY, ERNEST VIVIAN.

A.B., Indiana University, 1909; A.M., 1912; Ph.D., 1913.

History. Thesis: The electoral history of Indiana.

SLIPHER, VESTO MELVIN.

A.B., Indiana University, 1901; A.M., 1903; Ph.D., 1909.

Astronomy. Thesis: The spectrum of Mars. Astroph. Jour., XXVIII.

TUCKER, WILLIAM MOTIER.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1916.

Geology. Thesis: The hydrology of Indiana. Geol. Ind. Publ. No. 9, Div. Geol. Dept. Cons. Ind. 1921.

WEATHERWAX, PAUL.

A.B., Indiana University, 1914; A.M., 1915; Ph.D., 1918.

Botany. Thesis: The evolution of Maize. Bull. Torr. Bot. Club, XLV, pp. 309-342. 1918.

WILSON, (MRS.) MILDRED NOTHNAGEL.

A.B., Indiana University, 1913; M.S., University of Chicago, 1915; Ph.D., 1917.

Botany. Thesis: Fecundation and the formation of the primary endosperm nucleus in certain Liliaceæ. Bot. Gaz., LXVI, pp. 143-160. 1918.

WOLFE, HAROLD EICHHOLTZ.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1919.

Mathematics. Thesis: A study of plane circle-to-circle transformations by means of tetracyclic coördinates. New Era Press. 1920.

WOODBURN, WILLIAM LOGAN.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1912.

Botany. Thesis: Spermatogenesis in certain hepaticæ. Ann. Bot., XXV,
pp. 299-311. 1911.

WOOLEY, ELMER OTTO.

A.B., Indiana University, 1907; A.M., Harvard University, 1913; Ph.D., Indiana
University, 1915.

German. Thesis: The sphere of music and musical terms in Goethe's
lyric poems. Bloomington, pp. 90. 1918.

III. BIBLIOGRAPHY OF PUBLICATIONS BY PRESENT MEMBERS OF THE FACULTY OF THE GRADUATE SCHOOL, AND OF GRADUATE STUDENTS SINCE JANUARY, 1904, BY DEPARTMENTS

A bibliography of the publications of members of Indiana University from its founding to 1904 was published in 'Indiana University, 1820-1904' pp. 197-348. Supplementary lists were published in 'Report of the Dean of the Graduate School to the President-1912'.

The present list enumerates the papers of the present faculty of the Graduate School and of those graduate students who have been in residence since 1904. The authors are arranged by Departments and alphabetically under Departments.

TABLE OF ABBREVIATIONS

Abn.—Abnormal	Dept.—Department
Acad.—Academy	Div.—Division
Adm.—Administration	Econ.—Economic
Adv.—Advancement	Economics
Agr.—Agricultural	Economy
Alum.—Alumni	Ed.—Edition
Am.—American	Educ.—Educational
Anat.—Anatomy	Education
Anatomical	Educator
Ann.—Annual	Elec.—Electrical
Annals	Electrochem.—Electrochemistry
App.—Applied	Elem.—Elementary
Asso.—Association	Eng.—Engineer
Biol.—Biological	Engineering
Biology	Exp.—Experimental
Bot.—Botanical	Exped.—Expedition
Botanist	Ext.—Extension
Botany	Fed.—Federal
Brit.—British	Gaz.—Gazette
Bull.—Bulletin	Geog.—Geography
Char.—Charities	Geol.—Geologist
Chem.—Chemical	Geology
Chemistry	Ger.—Germanic
Chemist	Hist.—History
Circ.—Circular	Historical
Col.—College	Hort.—Horticultural
Collect.—Collection	Ind.—Indiana
Com.—Commission	Indust.—Industrial
Comp.—Comparative	Internat.—International
Conf.—Conference	Jour.—Journal
Cong.—Congress	Lab.—Laboratory
Cons.—Conservation	Lang.—Language
Corr.—Correction	Mag.—Magazine

- | | |
|------------------------|-----------------------|
| Man.—Manual | Quart.—Quarterly |
| Math.—Mathematics | Rec.—Record |
| Med.—Medicine | Records |
| Medical | Reg.—Register |
| Mem.—Memoirs | Rep.—Report |
| Mier.—Microscopy | Res.—Research |
| Mimeo.—Mimeographed | Resources |
| Miscell.—Miscellaneous | Rev.—Review |
| Mo.—Monthly | Rom.—Romanic |
| Mod.—Modern | Sci.—Science |
| Morph.—Morphology | Scientific |
| Mun.—Municipal | Scientist |
| Mus.—Museum | Sch.—School |
| Nat.—National | Sem.—Seminary |
| Natural | Ser.—Series |
| Naturalist | Soc.—Social |
| N.S.—New Series | Society |
| Ped.—Pedagogical | Sociol.—Sociological |
| Pharm.—Pharmacological | Sociology |
| Phil.—Philosophical | Smithson.—Smithsonian |
| Philosophy | Sta.—Station |
| Phila.—Philadelphia | Sup.—Supervision |
| Philol.—Philology | Supt.—Superintendent |
| Phot.—Photography | Surv.—Survey |
| Phys.—Physical | Torr.—Torrey |
| Physiol.—Physiology | Tr.—Training |
| Pol.—Political | Trans.—Transactions |
| Politics | Univ.—University |
| Pop.—Popular | Val.—Valley |
| Proc.—Proceedings | Voc.—Vocational |
| Prof.—Professors | W.—West |
| Psy.—Psychological | Wash.—Washington |
| Psychology | Weath.—Weather |
| Pt.—Part | Zoöl.—Zoölogy |
| Publ.—Publications | |

DEPARTMENT OF ANATOMY

JACOB A. BADERTSCHER, Professor of Anatomy.

Ph.B., Ohio University, 1909; Ph.M., 1910; Ph.D., Cornell University, 1914.

1. Peculiarity in the mode of entrance of the optic nerve into the eyeball in some rodents. *Proc. Soc. Exp. Biol. and Med.*, IX, pp. 4-6. 1911.
2. Muscle degeneration and its relation to the origin of eosinophilic leucocytes in amphibia (*Salamandra atra*). *Am. Jour. Anat.*, XV, pp. 69-86, 7 figures. 1913.
3. The development of the thymus in the pig, I. Morphogenesis. *Am. Jour. Anat.*, XVII, pp. 317-337, 5 text-figures, 2 plates. 1915.
4. The development of the thymus in the pig, II. Histogenesis. *Am. Jour. Anat.*, XVII, pp. 437-493, 3 plates. 1915.
5. The fate of the ultimobranchial bodies in the pig (*Sus scrofa*). *Am. Jour. Anat.*, XXIII, pp. 89-131, 4 plates. 1918.
6. The ultimobranchial bodies in postnatal pigs (*Sus scrofa*). *Am. Jour. Anat.*, XXV, pp. 13-25, 4 figures. 1919.
7. Eosinophilic leucocytes in the thymus of postnatal pigs. *Anat. Rec.*, XVIII, pp. 23-34. 1920.

BURTON DORR MYERS, Assistant Dean of the School of Medicine, and Professor of Anatomy.

Ph.B., Buchtel College, 1893; A.M., Cornell University, 1900; M.D., University of Leipsic, 1902.

1. The Chiasma of the toad (*Bufo lentiginosus*) and of some other vertebrates. *Zeitschrift, f. Morphologie u. Anthropologie*, III, pp. 183-207, 2 plates. 1901.
2. Beitrag zur Kenntniss des Chiasmas und der Commissuren am Boden des dritten Ventrikels. *Archiv f. Anat. u. Physiologie für 1902*, Anatomische Abth., pp. 347-376, 15 plates. 1902.
3. Fixation of tissues by injection. *Jour. App. Micr.* Nov., 1903.
4. Review of Gerrish's 'Textbook of anatomy'. *Johns Hopkins Bull.*, p. 145. May, 1903.
5. Review of Karl Camillo Schneider's 'Lehrbuch der vergleichenden Histologie der Thiere'. *Sci.*, N.S. Sept., 1903.
6. On Rauber's 'Lehrbuch der Anatomie des Menschen'. *Anat. Rec.*, II, pp. 377-379. 1908.
7. Review of S. H. Gage's 'The microscope'. *Anat. Rec.*, V, p. 562. 1911.
8. The position of the normal stomach, with observations on the movements of the diaphragm. *Anat. Rec.*, VIII, 1914, pp. 128-129; *Jour. Ind. State Med. Asso.*, VIII, p. 460. 1915.

9. Histological changes in testes following vasectomy. *Anat. Rec.*, X, pp. 228-229. 1915-16.
10. Education qualifications for practice of medicine. *Jour. Ind. State Med. Asso.*, XI, p. 410. 1918.
11. A study of the development of certain features of the cerebellum. *Contributions to Embryology*, Carnegie Institution, IX, pp. 365-375. 1920.

DARMON A. RHINEHART.

A.B., Indiana University, 1910; A.M., 1912; M.D., 1913.

1. The nerves of the thyroid and parathyroid bodies. *Am. Jour. Anat.*, XIII, pp. 91-102, 5 figures. 1912.

DEPARTMENT OF BOTANY

FRANK MARION ANDREWS, Associate Professor of Botany.

A.B., Indiana University, 1894; A.M., 1895; B.A.M. and Ph.D., University of Leipsic, 1902.

1. Development of the embryo-sac of *Jeffersonia diphylla*. Bot. Gaz., XX, pp. 423-425. 1895.
2. Karyokinesis in *Magnolia* and *Liriodendron* with special reference to the behavior of the chromosomes. Beihefte z. Botan. Centralblatt, XI, pp. 134-142. 1902.
3. Ueber die Wirkung der Centrifugalkraft auf Pflanzen. Jahrb. f. wiss. Bot., XXXVIII, pp. 40. 1903.
4. Physiological apparatus. Proc. Ind. Acad. Sci. for 1904, pp. 305-314. 1905.
5. The effect of gases on nuclear division. Ann. of Bot., XIX, pp. 521-530. 1905.
6. Die Anatomie von *Epigaea repens*. Beihefte z. Botan. Centralblatt, XIX, Abt. 1, Heft. 2, pp. 514-520. 1905.
7. Plasmodemes. Proc. Ind. Acad. Sci. for 1905, pp. 191-194. 1906.
8. The effect of alkaloids and other vegetable poisons on protoplasm. Proc. Ind. Acad. Sci. for 1905, pp. 195-196. 1906.
9. Some monstrosities in *Trillium*. Proc. Ind. Acad. Sci. for 1905, pp. 187-188. 1906.
10. A natural proof that the root tip alone is sensitive to the gravitation stimulus. Proc. Ind. Acad. Sci. for 1905, pp. 189-190. 1906.
11. Some monstrosities in *Trillium*. Plant World, IX, pp. 101-103. 1906.
12. An abnormal *Porella platyphylla*. Bot. Gaz., XLV, p. 340. 1908.
13. Apparatus for illustrating Boyle's Law. Proc. Ind. Acad. Sci. for 1909, pp. 369-371. 1910.
14. Some monstrosities in plants. Proc. Ind. Acad. Sci. for 1909, pp. 373-374. 1910.
15. A list of algæ. Proc. Ind. Acad. Sci. for 1909, pp. 375-380. 1910.
16. Development of the embryo-sac of *Hybanthus concolor*. Bull. Torr. Bot. Club, XXXVII, pp. 477-478. 1910.
17. The botanical garden of the University of Amsterdam. Plant World, XIII, pp. 53-56. 1910.
18. Twin hybrids and their anatomical distinctions. Bot. Gaz., L, pp. 193-201. 1910.
19. Conjugation of two different species of *Spirogyra*. Bull. Torr. Bot. Club, XXXVIII, p. 299. 1911.
20. Some variations in plants. Proc. Ind. Acad. Sci. for 1911, pp. 279-281. 1912.

21. Protoplasmic streaming in *Mucor*. Bull. Torr. Bot. Club, XXXIX, pp. 455-499. 1912.
22. Conjugation in *Spirogyra*. Proc. Ind. Acad. Sci. for 1912, pp. 89-91. 1913.
23. Some observations concerning the reactions of the leaf hairs of *Salvinia natans*. (With Max M. Ellis.) Bull. Torr. Bot. Club, XL, pp. 441-445. 1913.
24. Forests and floods. Proc. Ind. Acad. Sci. for 1913, pp. 203-212. 1914.
25. Stomata of *Trillium nivale*. Proc. Ind. Acad. Sci. for 1914, pp. 209-211. 1915.
26. Die Wirkung der Zentrifugalkraft auf Pflanzen. Jahrb. für wiss. Bot., LVI, pp. 221-253. 1915.
27. The effect of centrifugal force on *Oscillatoria*. Proc. Ind. Acad. Sci. for 1915, pp. 151-152. 1916.
28. *Closterium moniliferum*. Proc. Acad. Sci. for 1916, pp. 323-324. 1917.
29. Studies on pollen, I. Proc. Ind. Acad. Sci. for 1917, p. 163. 1918.
30. Stoppage of a sewer pipe by roots of *Acer saccharum*. Proc. Ind. Acad. Sci. for 1917, p. 165. 1918.
31. Anthocyanin of *Beta vulgaris*. Proc. Ind. Acad. Sci. for 1917, p. 167. 1918.
32. Improved forms of Maximow's automatic pipette. Proc. Ind. Acad. Sci. for 1917, pp. 169-173. 1918.
33. The effect of centrifugal force on plants. Proc. Ind. Acad. Sci. for 1917, p. 175. 1918.
34. Some large trees of Indiana. Proc. Ind. Acad. Sci. for 1918, pp. 261-263. 1919.
35. The effect of soaking in water and of aeration on the growth of *Zea Mays*. (With Colonzo C. Beals.) Bull. Torr. Bot. Club, XLVI, pp. 91-100. 1919.

COLONZO CHELICE BEALS.

A.B., Indiana University, 1917.

1. The effect of soaking in water and of aeration on the growth of *Zea Mays*. (With F. M. Andrews.) Bull. Torr. Bot. Club, XLVI, pp. 91-100. 1919.

CAROLINE ANNA BLACK.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1912.

1. The development of the imbedded-antheridium in *Dryopteris stipularis* (Willd.) Maxon, and 'Nephrodium Molle'. Bull. Torr. Bot. Club, XXXVI, pp. 557-571, plates 26-28. 1909.
2. The morphology of *Riccia frostii* Aust. Ann. Bot., XXVII, pp. 511-532, plates XXXVII-XXXVIII. 1913.

HARRY BATES BROWN.

A.B., Indiana University, 1906; A.M., 1907.

1. Algae periodicity in certain ponds and streams. Bull. Torr. Bot. Club, XXXV, pp. 223-248, 3 figures. 1908.

(MRS.) RUTH WOOLERY BYBEE.

A.B., Indiana University, 1912; A.M., 1914.

1. Meiotic divisions in the microspore mother-cells of *Smilacina racemosa* (L) Desf. Ann. Bot., XXIX, pp. 471-482. 1915.

FRED DONAGHY.

A.B., Indiana State Normal School, 1914; A.M., Indiana University, 1915.

1. The morphology of *Riccia fluitans* L. Proc. Ind. Acad. Sci. for 1915, pp. 131-133. 1916.

MAX MAPES ELLIS.

A.B., Indiana University, 1907; A.M., 1908; Ph.D., 1911.

1. Some observations concerning the reactions of the leaf hairs of *Salvinia natans*. (With Frank M. Andrews.) Bull. Torr. Bot. Club, XL, pp. 441-445. 1913.

CHARLES EDWARD LEWIS.

A.B., Indiana University, 1902; A.M., 1903.

1. Studies on some anomalous dicotyledonous plants. Bot. Gaz., XXXVII, pp. 127-138, 2 plates. 1904.

ISAAC MCKINNEY LEWIS.

A.B., Indiana University, 1906; A.M., 1907; Ph.D., 1909.

1. The behavior of the chromosomes in *Pinus* and *Thuja*. Ann. Bot., XXII, pp. 529-556, 4 plates. 1908.

DAVID MYERS MOTTIER, Professor of Botany.

A.B., Indiana University, 1891; A.M., 1892; Ph.D., University of Bonn, 1897.

1. Notes on the apical growth of liverworts. Bot. Gaz., XVI, p. 141, 1 plate. 1891.
2. On the archegonium and the apical growth of the stem in *Tsuga canadensis* and *Pinus sylvestris*. Bot. Gaz., XVII, p. 141, 1 plate. 1892.
3. On the development of the embryo-sac of *Arisæma triphyllum*. Bot. Gaz., XVII, p. 258, 1 plate. 1892.
4. The phylogeny of ferns. A review of J. Bretland Farmer's 'On the embryogeny of *Angiopteris evecta* Hoffm'. Ann. Bot., VI, p. 265; Bot. Gaz., XVIII, p. 106. 1893.
5. On the embryo-sac and embryo of *Senecio aureus*. Bot. Gaz., XVIII, pp. 245-253, 2 plates. 1893.
6. Development of the embryo-sac of *Acer rubrum*. Bot. Gaz., XVIII, pp. 375-377, 1 plate. 1893.
7. Contributions to the life-history of *Notothylas*. Ann. Bot., VIII, pp. 391-402, 3 plates. 1894.
8. Contributions to the embryology of the Ranunculaceæ. Bot. Gaz., XX, pp. 241-248, 296-304, 4 plates. 1895.

9. Beiträge zur Kenntniss der Kerntheilung in den Pollenmutterzellen einiger Dikotylen und Monokotylen. Jahrb. für wiss. Bot., XXX, pp. 169-204, 6 plates. 1897.
10. Ueber das Verhalten der Kerne bei der Entwicklung des Embryosacks und die Vorgänge bei der Befruchtung. Jahrb. für wiss. Bot., XXXI, pp. 125-158, 3 plates. 1897.
11. Ueber den zweiten Theilungsschritt in Pollenmutterzellen. (Joint author with Edouard Strasburger.) Ber. der Deutsch. Bot. Gesellschaft, XV, pp. 327-332, 1 plate. 1897.
12. Ueber die Chromosomenzahl bei der Entwicklung der Pollenkörner von Allium. Ber. der Deutsch. Bot. Gesellschaft, XV, p. 474. 1897.
13. Das Centrosom bei Dictyota. Ber. der Deutsch. Bot. Gesellschaft, XVI, pp. 123-128. 1898.
14. The centrosome in cells of the gametophyte of Marchantia. Proc. Ind. Acad. Sci. for 1898. 1899.
15. Endosperm haustoria of *Lilium candidum*. Proc. Ind. Acad. Sci. for 1898. 1899.
16. Nuclear division in vegetative cells. Proc. Ind. Acad. Sci. for 1898. 1899.
17. The effect of centrifugal force upon the cell. Ann. Bot., XIII, pp. 325-361, 1 plate. 1899.
18. Nuclear and cell division in *Dictyota dichotoma*. Ann. Bot., XIV, pp. 163-192, 2 plates. 1900.
19. A practical laboratory guide for the first year in botany. Bloomington, Ind., last ed., 1920, pp. 84. 1902.
20. The behavior of the chromosomes in the spore mother-cells of higher plants and the homology of the pollen and embryo-sac mother cells. Bot. Gaz., XXXV, pp. 250-282, 4 plates. 1903.
21. The development of the spermatozoid of Chara. Ann. Bot., XVIII, 1 plate. 1904.
22. Further studies on anomalous dicotyledonous plants. Proc. Ind. Acad. Sci. for 1903, p. 139. 1904.
23. Fecundation in plants. Carnegie Institution of Washington, Publ. No. 15, pp. iv, 187. 1904.
24. The embryology of some anomalous dicotyledons. Ann. Bot., IX, pp. 447-463, 4 plates. 1904.
25. The development of the heterotypic chromosomes in pollen mother-cells. Ann. Bot., XXI, pp. 309-347, 4 plates. 1907.
26. The history and control of sex. Proc. Ind. Acad. Sci. for 1907, pp. 28-47. 1908.
27. The present status of the chromosome controversy. Proc. Ind. Acad. Sci. for 1905, pp. 205-206. 1906.
28. The blooming of *Cercis canadensis* in September. Proc. Ind. Acad. Sci. for 1905, p. 207. 1906.

29. A peculiar monstrosity in a seedling of *Zea Mays*. Proc. Ind. Acad. Sci. for 1905, p. 208. 1906.
30. Some anomalies in the endosperm of *Pinus*. Proc. Ind. Acad. Sci. for 1908, pp. 95-97. 1908.
31. The development of the heterotypic chromosomes in the megaspore mother-cell of *Lilium*. Ann. Bot., XXIII, pp. 343-352. 1909.
32. Nuclear phenomena of sexual reproduction in Angiosperms. Am. Nat., XLIV, pp. 604-623. 1910.
33. Notes on the sex of the gametophyte of *Onoclea struthiopteris*. Bot. Gaz., L, pp. 209-213. 1910.
34. Further notes on the seedless fruits of the common persimmon, *Diospyros virginiana* L. Proc. Ind. Acad. Sci. for 1912, p. 67. 1913.
35. The influence of certain environic factors on the development of fern prothallia. Proc. Ind. Acad. Sci. for 1912, p. 85. 1913.
36. The development and behavior of the chromosomes in the first or heterotypic mitosis of the pollen mother cells of *Allium cernuum* Roth. (Joint author with Mildred Nothnagel.) Bull. Torr. Bot. Club, XL, pp. 555-565. 1913.
37. Mitosis in the pollen mother cells of *Acer negundo* L. and *Staphylea trifolia* L. Ann. Bot., XXVIII, pp. 115-135. 1914.
38. Beobachtungen über einige Farnprothallien mit Bezug auf eingebettete Antheridien und Apogamie. Jahrb. für wiss. Bot., LVI, pp. 65-83. 1915.
39. Plant chimeras and their relation to hereditary phenomena. Sch. Sci. and Math., XV, pp. 713-716. 1915.
40. Some methods for the study of plastids in higher plants. Proc. Ind. Acad. Sci. for 1915, pp. 127-129. 1916.
41. A second blooming of *Magnolia soulangiana*. Proc. Ind. Acad. Sci. for 1915, p. 149. 1916.
42. Chloroform as a paraffin solvent in the embedding process. Bot. Gaz., LXI, pp. 251-252. 1916.
43. Plastids. Proc. Ind. Acad. Sci. for 1917, p. 97. 1918.
44. Chondriosomes and the primordia of chloroplasts and leucoplasts. Ann. Bot., XXXII, pp. 91-114. 1918.

CLAUDE E. O'NEAL.

A.B., Indiana University, 1911; A.M., 1913.

1. Some species of *Numularia* common in Indiana. Proc. Ind. Acad. Sci. for 1914, pp. 235-250. 1915.

CHARLES ELMER OWENS.

A.B., Indiana University, 1910; A.M., 1911.

1. A monograph of common Indiana species of *Hypoxylon*. Proc. Ind. Acad. Sci. for 1911, pp. 291-308. 1912.

FERMEN LAYTON PICKETT.

A.B., Indiana University, 1910; A.M., Harvard University, 1913; Ph.D., Indiana University, 1915.

1. A case of changed polarity in *Spirogyra elongata*. Bull. Torr. Bot. Club, XXIX, pp. 509-510. 1912.
2. Length of life of *Arisæma triphyllum* corms. Proc. Ind. Acad. Sci. for 1912, pp. 77-78. 1913.
3. Preparation of whole pollen mother cells. Sci., N.S., XXXVI, pp. 479-480. 1912.
4. The development of the embryo-sac of *Arisæma triphyllum*. Bull. Torr. Bot. Club, XL, pp. 229-235. 1913.
5. Resistance of the prothallia of *Camptosorus rhizophyllus* to desiccation. Bull. Torr. Bot. Club, XL, pp. 641-645. 1913.
6. The germination of seeds of *Arisæma*. Proc. Ind. Acad. Sci. for 1913, pp. 125-128. 1914.
7. The development of the prothallium of *Camptosorus rhizophyllus*. Bot. Gaz., XLVII, pp. 228-238. 1914.
8. Some ecological adaptations of certain fern prothallia—*Camptosorus rhizophyllus* Link., *Asplenium platyneuron* Oakes. Am. Jour. Bot., I, pp. 441-453. 1914.
9. Notes on the survival of extreme drought by certain mosses. The Bryologist, XVII, pp. 94-95. 1914.
10. The wandering of tapetal nuclei of *Arisæma*. Am. Jour. Bot., III, pp. 461-469. 1916.
11. A contribution to our knowledge of *Arisæma triphyllum*. Mem. Torr. Bot. Club, XVI, pp. 54. 1916.

GLEN BLAINE RAMSEY.

A.B., Indiana University, 1913; A.M., 1914.

1. The genus *Rosellinia* in Indiana. Ind. Acad. Sci. for 1914, pp. 251-259. 1915.

JAMES M. VAN HOOK, Associate Professor of Botany.

A.B., Indiana University, 1899; A.M., 1900.

1. Notes on the division of the cell and nucleus in liverworts. Bot. Gaz., XXX, pp. 394-399, 1 plate. Dec., 1900.
2. Pink rot, an attendant of apple scab. (With J. Craig.) Cornell Univ. Agr. Exp. Sta. Bull., 207, pp. 161-171, 5 figures, 2 plates. 1902.
3. Diseases of ginseng. Cornell Univ. Agr. Exp. Sta. Bull., 219, pp. 163-186. 1904.
4. Brown rot, its effect on fruit, twigs, leaves, and blossoms. Ohio State Hort. Rep. for 1904, pp. 141-147. 1904.
5. *Ascochyta pisi*, a disease of seed peas. Ohio Nat., pp. 507-512. April, 1906.
6. A cause of freak peas. Torreya, pp. 67-69. April, 1906.
7. Blighting of field and garden peas. Ohio Agr. Exp. Sta. Bull., 173, pp. 231-250. April, 1906.
8. A disease of ginseng due to *Phytophthora*. Special Crops, p. 94. May, 1906.

9. Dying of bearing grape-vines. (With A. D. Selby.) Ohio Agr. Exp. Sta. Circ., LXIV, pp. 6. Feb., 1907.
10. Celery root rot. Ohio Agr. Exp. Circ., LXXII, pp. 8. 1907.
11. Indiana fungi, I. Proc. Ind. Acad. Sci. for 1910, pp. 205-212. 1911.
12. Indiana fungi, II. Proc. Ind. Acad. Sci. for 1911, pp. 347-354. 1912.
13. Indiana fungi, III. Proc. Ind. Acad. Sci. for 1912, pp. 99-101. 1913.
14. Indiana fungi, IV. Proc. Ind. Acad. Sci. for 1915, pp. 141-148. 1916.

PAUL WEATHERWAX, Associate Professor of Botany.

A.B., Indiana University, 1914; A.M., 1915; Ph.D., 1918.

1. Ecological notes on certain White river algæ. Proc. Ind. Acad. Sci. for 1913, pp. 107-108. 1914.
2. *Aphanomyces phycophilus*. Proc. Ind. Acad. Sci. for 1913, pp. 109-111. 1914.
3. Some peculiarities in *Spirogyra dubia*. Proc. Ind. Acad. Sci. for 1914, pp. 203-206. 1915.
4. An apparatus for aerating culture solutions. Proc. Ind. Acad. Sci. for 1914, pp. 157-160. 1915.
5. A remarkable case of fasciation in *Oenothera biennis*. Proc. Ind. Acad. Sci. for 1916, pp. 363-364. 1917.
6. A variation in *Plantago lanceolata*. Proc. Ind. Acad. Sci. for 1916, pp. 365-367. 1917.
7. Variation and varieties of *Zea mays*. Proc. Ind. Acad. Sci. for 1917, pp. 99-103. 1918.
8. Morphology of the flowers of *Zea mays*. Bull. Torr. Bot. Club, XLIII, pp. 127-144. 1916.
9. Improved technique for corn pollination. Proc. Ind. Acad. Sci. for 1917, pp. 105-107. 1918.
10. The development of the spikelets of *Zea mays*. Bull. Torr. Bot. Club, XLIV, pp. 483-496. 1917.
11. The evolution of maize. Bull. Torr. Bot. Club, XLV, pp. 309-342. 1918.
12. A method of teaching diffusion and osmosis in connection with biological work. Proc. Ind. Acad. Sci. for 1918, pp. 88-92. 1919.
13. Gametogenesis and fecundation in *Zea mays* as the basis of xenia and heredity in the endosperm. Bull. Torr. Bot. Club, XLVI, pp. 73-90. 1919.
14. The ancestry of maize—a reply to criticism. Bull. Torr. Bot. Club, XLVI, pp. 275-278. 1919.
15. The morphological basis of some experimental work with maize. Am. Nat., LIII, pp. 269-272. 1919.
16. Paraffin solvents in histological work. Bot. Gaz., LXVIII, pp. 305-306. 1919.

(Mrs.) MILDRED NOTHNAGEL WILSON.

A.B., Indiana University, 1913; M.S., University of Chicago, 1915; Ph.D., Indiana University, 1917.

1. The mosses of Monroe county, Indiana. Proc. Ind. Acad. Sci. for 1913,
pp. 103-105. 1914.
2. Corrections to the list of mosses of Monroe county, Indiana, I, II.
(With Fermen L. Pickett.) Proc. Ind. Acad. Sci. for 1914, pp. 179-180.
1915.
3. Mosses of Monroe county, Indiana, III. Proc. Ind. Acad. Sci. for
1914, pp. 181-184. 1915.
4. Fecundation and formation of the primary endosperm nucleus in
certain Liliaceae. Bot. Gaz., LXVI, pp. 143-160. 1918.
5. The resistance of *Mucor* zygotes. Proc. Ind. Acad. Sci. for 1917,
pp. 181-187. 1918.

WILLIAM LOGAN WOODBURN.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1912.

1. A remarkable case of polyspermy in ferns. Bot. Gaz., XLIV, p. 227.
1907.
2. Notes on the native seedless persimmon. (Preliminary report.) Proc.
Ind. Acad. Sci. for 1908, pp. 99-101. 1909.
3. Development of the embryo-sac and endosperm in some seedless per-
simmons. Bull. Torr. Bot. Club, XXXVIII, pp. 379-384. 1911.
4. Spermatogenesis in certain Hepaticæ. Ann. Bot., XXV, pp. 299-313.
1911.

DEPARTMENT OF CHEMISTRY

HOWE ABBOTT.

A.B., Indiana University, 1901.

1. Electrolytic preparation of iodoform from acetone. Jour. Pharm. Chem., VII, p. 84. 1903.

WILLIAM HOWARD BELL.

A.B., State Normal School, 1917; A.M., Indiana University, 1918.

See Frank C. Mathers, 70.

THOMAS GROVER BLUE.

A.B., Indiana University, 1915; A.M., 1916.

See Frank C. Mathers, 53.

ROY SAMUEL BONSIK.

A.B., Indiana University, 1910; A.M., 1911.

See Frank C. Mathers, 16, 18.

WILLIAM GREY BOWERS.

A.B., Ohio Wesleyan, 1905; A.M., Indiana University, 1911.

See Oliver W. Brown, 10.

OLIVER W. BROWN, Professor of Chemistry.

B.S., Earlham College, 1895; A.M., Indiana University, 1896.

1. Solubility and boiling point. Jour. Phys. Chem., I, pp. 784-786. 1897.
2. Distribution of mercuric chloride between toluene and water. Jour. Phys. Chem., II, pp. 51-52. 1898.
3. Preparation of potassium perselenate. (With L. M. Dennis.) Jour. Am. Chem. Soc., XXIII, pp. 358-360. 1901.
4. Efficiency of the nickel-plating tank. Trans. Am. Electrochem. Soc., IV, pp. 83-99. 1903.
5. Metallurgical process for smelting zinc. (With William F. Oosterle.) U.S. Patent No. 742830. Nov. 3, 1903.
6. Electric smelting of zinc. (With William F. Oosterle.) Trans. Am. Electrochem. Soc., VIII, pp. 171-182. 1905.
7. Reduction of metal sulphides. Trans. Am. Electrochem. Soc., IX, pp. 109-115. 1906.
8. Electrodeposition of copper upon iron. (With Frank C. Mathers.) Jour. Phys. Chem., X, pp. 39-51. 1906.
9. Treatment of storage battery elements before putting them out of commission. (With Royd R. Sayres.) Trans. Am. Electrochem. Soc., XII, pp. 311-323. 1907.
10. The self-discharge of Plante and Faure storage batteries. (With William G. Bowers.) Trans. Am. Electrochem. Soc., XVIII, pp. 69-75. 1910.

11. A modified method for the determination of lead peroxide in red lead. (With Alpheus R. Nees.) Proc. Ind. Acad. Sci. for 1911, pp. 247-250. 1911.
12. A study of the variations of the physical and chemical properties of red lead. (With Alpheus R. Nees.) Jour. Indust. and Eng. Chem., IV, pp. 867-876. 1912.
13. Production of lead oxides. (With Alpheus R. Nees.) U.S. Patent, No. 1072205. Sept. 2, 1913.
14. Laboratory manual of quantitative chemical analysis. Mimeo. Ed., pp. 15. 1918.
15. Catalytic preparation of the amidophenols and the phenylenediamines. (With Leo L. Carrick.) Jour. Am. Chem. Soc., XLI, pp. 437-440. 1919.
16. Electrolytic preparation of potassium ferrieyanide. (With Clyde O. Henke and Isaiah L. Miller.) Jour. Phys. Chem., XXIV, pp. 230-237. 1920.
17. Anode corrosion of lead in sodium hydroxide. (With Lee T. Smith and Clyde O. Henke.) Jour. Phys. Chem., XXIV, pp. 367-378. 1920.
18. Electrolytic preparation of sodium permanganate. (With Clyde O. Henke.) Jour. Phys. Chem., XXIV, pp. 608-616. 1920.

GEORGE CLARENCE BUSH.

A.B., Indiana University, 1898; A.M., 1899.

See Robert E. Lyons, 23.

CAMPBELL COLON CARPENTER.

A.B., Indiana University, 1906.

See Robert E. Lyons, 24.

LEO LEHR CARRICK.

A.B., Valparaiso University, 1910; M.S., 1911; A.M., Indiana University, 1915.

See Oliver W. Brown, 15.

BARRETT WILLIAM COCKRUM.

A.B., Indiana University, 1914; A.M., 1915.

See Frank C. Mathers, 39, 40, 48, 49.

PAUL C. COUGHLIN.

A.B., Indiana University, 1900; A.M., 1901.

1. The preparation of bromoform by electrolysis. Am. Chem. Jour., XXVII, p. 63. 1902.

LOUIS SHERMAN DAVIS, Professor of Chemistry.

A.B., Indiana University, 1891; A.M., 1892; Ph.D., University of Marburg, 1896.

1. Ueber die Alkaloide der Samen von *Lupinus angustifolius* und *Lupinus albus*. Archiv d. Pharm., p. 85. 1897.

2. The qualitative analysis of inorganic bodies. (With Robert E. Lyons.) Anderson, Ind., pp. 210. 1897.
3. A manual of toxicological analysis. (With Robert E. Lyons.) Anderson, Ind., pp. 112. 1899.
4. The qualitative analysis of inorganic bodies. Revised edition. (With Robert E. Lyons.) Anderson, Ind., pp. 151. 1900.
5. A manual of general chemistry. Chicago, pp. 400, 92 plates. 1904

JOSEPH OTTO FRANK.

A.B., Indiana University, 1909; A.M., 1912.

See Frank C. Mathers, 28.

ALFRED FREDERICK OTTOMAN GERMANN.

A.B., Indiana University, 1909; A.M., 1910.

See Frank C. Mathers, 15, 17.

CLYDE OVERBECK HENKE, Instructor in Chemistry.

A.B., Indiana University, 1919; A.M., 1920.

See Oliver W. Brown, 16, 17, 18.

HARLEY VERNON HOUSEMAN.

A.B., Indiana University, 1912; A.M., 1914.

See Frank C. Mathers, 45.

JOHN RALPH KUEBLER.

A.B., Indiana University, 1912; A.M., 1915.

See Frank C. Mathers, 47.

IRA ELVER LEE.

A.B., Indiana University, 1911; A.M., 1912.

See Frank C. Mathers, 20, 22, 26, 27, 29, 45.

ARTHUR BLANK LEIBLE.

A.B., Indiana University, 1915; A.M., 1916.

See Frank C. Mathers, 54.

ROBERT EDWARD LYONS, Professor of Chemistry.

A.B., Indiana University, 1889; A.M., 1890; Ph.D., University of Heidelberg, 1894.

1. A method for the estimation of albumin in urine. (With T. C. Van Nüys.) Am. Chem. Jour., XII, pp. 1-17. 1890.
2. Carbon dioxide in the urine. (With T. C. Van Nüys.) Am. Chem. Jour., XIV, pp. 14-20. 1892.
3. Die Phenylverbindungen von Schwefel, Selen, und Tellur. Heidelberg, pp. 40. 1894.
4. Ueber Diphenylselenide und einige Derivate desselben. (With F. Krafft.) Ber. d. Deutsch. Chem. Ges., XXVII, pp. 1760-1768. 1894.
5. Ueber Diphenyltellurid und ein Verfahren zur Darstellung von Sulphiden, Seleniden, und Telluriden. (With F. Krafft.) Ber. d. Deutsch. Chem. Ges., XXVII, pp. 1768-1773. 1894.

6. The effect of grape sugar upon the composition of certain fat-producing bacteria. *Proc. Ind. Acad. Sci.* for 1895, pp. 85-88. 1896.
7. Ueber Diphenylselenon, $C_6H_5 \cdot SeO_2 \cdot C_6H_5$. (With F. Krafft.) *Ber. d. Deutsch. Chem. Ges.*, XXIX, pp. 424-429. 1896.
8. The qualitative analysis of inorganic bodies. (With Louis Sherman Davis.) *Anderson, Ind.*, pp. 210. 1897.
9. Analyses of certain Indiana shales and fire clays. (Assisted by Oliver W. Brown.) *Ann. Rep. State Geol.* for 1898, pp. 68, 69, 114, 115, 130, 134. 1898.
10. A manual of toxicological analysis. (With Louis Sherman Davis.) *Anderson, Ind.*, pp. 112, color plate. 1899.
11. The qualitative analysis of inorganic bodies. (With Louis Sherman Davis.) *Anderson, Ind.*, second edition, pp. 151. 1900.
12. Analyses of certain Indiana mineral waters. *Ann. Rep. of State Geol.* for 1901, pp. 70, 76, 83. 1901.
13. The quantitative determination of selenium in organic compounds. (Joint author with F. L. Shinn.) *Jour. Am. Chem. Soc.*, XXIV, pp. 1085-1094; *Zeits. f. anal. Chem.*, XLII, pp. 659-661. 1902.
14. Review of William Dodge Frost's 'Laboratory guide in elementary bacteriology', second edition. *Jour. Am. Chem. Soc.*, XXIV, pp. 595-596. 1902.
15. Analyses of certain Indiana coals. (With Frank C. Mathers.) *Ann. Rep. of State Geol.* for 1903. 1903.
16. Analyses of certain Indiana limestones and limes. (With Frank C. Mathers.) *Ann. Rep. of State Geol.*, 1903. 1903.
17. Review of R. H. Aders Plimmer's 'Chemical changes and products resulting from fermentations'. *Jour. Am. Chem. Soc.*, XXVI, p. 113. 1904.
18. The composition of fourteen Indiana clays. *Ann. Rep. of State Geol.* for 1904. 1904.
19. The composition and methods for the analysis of peat. *Ann. Rep. of State Geol.* for 1906, pp. 93-107. 1906.
20. The composition of forty iron ores from Indiana. *Ann. Rep. of State Geol.* for 1906. 1906.
21. An investigation of the fuel value of Indiana peat and Indiana coal. *Proc. Ind. Acad. Sci.* for 1907, pp. 57-58. 1908.
22. The chemical composition of Indiana soils and methods for soil analysis. *Ann. Rep. State Geol.* for 1907, pp. 47-55. 1907.
23. Concerning a-Di-Naphtyl selenide and telluride. (With G. C. Bush.) *Jour. Am. Chem. Soc.*, XXX, pp. 831-836; *Chemical Abstracts*, II, p. 2235. 1908.
24. A chemical examination and calorimetric test of Indiana peats. (With C. C. Carpenter.) *Jour. Am. Chem. Soc.*, XXX, pp. 1307-1311; *Chemical Abstracts*, II, p. 3277. 1908.
25. The destruction of platinum crucibles through the ignition of magnesium ammonium phosphate. *Proc. Ind. Acad. Sci.* for 1908. 1909.

26. The chemical composition of certain Indiana soils, II. Ten samples.
Rep. Dept. Geol. and Nat. Res. Ind. for 1908. 1908.
27. The chemical composition of Indiana soils, III. Twenty samples.
Rep. Dept. Geol. and Nat. Res. Ind. for 1909. 1909.
28. Notes on destruction of platinum crucibles in phosphate analysis.
Jour. Indust. and Eng. Chem., I, p. 27. 1909.
29. Effect of benzoic acid and sodium benzoate in artificial salivary, gastric,
and pancreatic digestions. Fed. Court Rep., Indianapolis, 1910.
30. Effect of benzoic acid and benzoates upon the growth and activity
of micro-organisms of the human intestine. Fed. Court Rep., Indian-
apolis. 1910.
31. Concerning the accuracy of the Le Wahl method for the determination
of benzoic acid in tomato products. Fed. Court Rep., Indianapolis.
1911.
32. The microscopic characteristics of catsup made from fresh and from
decayed tomatoes. Fed. Court Rep., Indianapolis. 1911.
33. Effect of ammonium chloride in the precipitation of barium sulphate.
Proc. Ind. Acad. Sci. for 1911. 1912.
34. A method for the accurate measurement of the specific volume of baked
bread. Rep. U.S. Court, District Oregon, Case No. 6375, Portland.
June, 1914.
35. The effect of dried egg albumin in baking powder upon the volume of
the baked product. Illustrated with chart. Rep. U.S. Court, District
Idaho, Calumet Co. vs. State Food Com., Boise. June, 1914.
36. The "water glass test" applied to baking powders containing egg
albumin. Rep. U.S. Court, District Idaho, Calumet Co. vs. State
Food Com., Boise. 1914.
37. Process for recovering gold and platinum metals. U.S. Patent No.
1118944. Dec., 1914.
38. A new process for recovering native platinum metals. U.S. Patent
No. 1126646. Jan., 1915.
39. Processes for recovering rusty gold and native platinum metals. Canad-
ian Patent No. 163544. Jan., 1916.
40. The recovery of native precious metals which do not amalgamate
with mercury. Russian Patent Application. 1916.
41. Processes for the recovery and regeneration of used soap from laundry
suds. U.S. Patent Application serial No. 209718. 1918.
42. Improvements in the process for the recovery of precious metals. U.S.
Patent No. 293828. 1919.

ASA MCKINNEY.

A.B., Indiana University, 1914; A.M., 1915.

See Frank C. Mathers, 41.

HUGH McHENRY MARBLE.

A.B., Hanover College, 1910; A.M., 1913.

See Frank C. Mathers, 36, 37.

FRANK CURRY MATHERS, Associate Professor of Chemistry.

A.B., Indiana University, 1903; A.M., 1905; Ph.D., Cornell University, 1907.

1. Electrodeposition of copper upon iron. (With Oliver W. Brown.)
Jour. Phys. Chem., X, pp. 39-51. 1906.
2. A study of the atomic weight of indium. Jour. Am. Chem. Soc., XXIX,
pp. 486-496. 1907.
3. Eine Studie über das Atomgewicht des Indiums. Ber. d. Deutsch.
Chem. Ges., XXXX, pp. 1220-1234. 1907.
4. The formation of selenic acid from lead selenate. Proc. Ind. Acad.
Sci. for 1907, pp. 104-105. 1908.
5. A method for the separation of iron from indium. Jour. Am. Chem.
Soc., XXX, pp. 209-211. 1908.
6. Some new compounds of indium. (With Carl G. Schluederberg.) Jour.
Am. Chem. Soc., XXX, pp. 211-216. 1908.
7. The electrolytic formation of selenic acid from lead selenate. Jour.
Am. Chem. Soc., XXX, pp. 1374-1378. 1908.
8. Electrolytic deposition of metals from perchlorate solutions. U.S.
Patent, No. 931944. 1909.
9. An evolution method for the determination of sulphur in sulphides
and sulphates. Proc. Ind. Acad. Sci. for 1908, pp. 159-160. 1909.
10. Preparation of perchloric acid from sodium perchlorate. Jour. Am.
Chem. Soc., XXXII, pp. 66-71. 1910.
11. Electrodeposition of lead from perchlorate baths. Trans. Am. Elec-
trochem. Soc., XVII, pp. 261-273; Brass World, VI, pp. 201-204.
1910.
12. Elektrolytische Fällung von Blei aus Perchlorat-Lösungen. Chemi-
ker-Zeitung, XXIV, pp. 1316-1323. 1910.
13. Studies on perchloric acid, I. Preparation of perchloric acid from
sodium perchlorate. Ind. Univ. Studies, No. 3, pp. 24-29. 1910.
14. Studies on perchloric acid, II. Electrodeposition of lead from perchlor-
ate baths. Ind. Univ. Studies, No. 4, pp. 30-40. 1910.
15. Studies on perchloric acid, III. Mercurous perchlorate coulometer.
(With Albert F. O. Germann.) Ind. Univ. Studies, No. 5, pp. 41-49.
1910.
16. The preparation of ammonium selenate: a new method. (With Roy S.
Bonsib.) Ind. Univ. Studies, No. 6, pp. 50-58. 1910.
17. Mercurous perchlorate electrolytic meter. (With Albert F. O. Ger-
mann.) Trans. Am. Electrochem. Soc., XIX, pp. 69-80. 1911.
18. Preparation of ammonium selenate: a new method. (With Roy S.
Bonsib.) Jour. Am. Chem. Soc., XXXIII, pp. 703-708. 1911.
19. Recovery of silver from silver chloride residues. Proc. Ind. Acad.
Sci. for 1911, pp. 241-242. 1912.
20. Qualitative detection and separation of potassium and sodium. (With
Ira E. Lee.) Proc. Ind. Acad. Sci. for 1911, pp. 227-228. 1912.

21. Value of fertilizing constituents of weeds of Indiana. Analysis of iron weeds. (With Gail M. Stapp.) Proc. Ind. Acad. Sci. for 1911, pp. 341-342. 1912.
22. A summary of the coal tests at Indiana University. (With Ira E. Lee.) Proc. Ind. Acad. Sci. for 1911, pp. 237-240. 1912.
23. The effect of addition substances in lead plating baths. (With O. Ralph Overman.) Trans. Am. Electrochem. Soc., XXI, pp. 313-330. 1912.
24. The preparation of perchloric acid: a summary. Trans. Am. Electrochem. Soc., XXI, p. 331. 1912.
25. Studies on perchloric acid, IV. Distillation of potassium perchlorate with sulphuric acid. Ind. Univ. Studies, No. 12, pp. 173-179. 1912.
26. Qualitative separation and detection of potassium and sodium with perchloric acid and fluosilicic acid. (With Ira E. Lee.) Ind. Univ. Studies, No. 13, pp. 180-182. 1912.
27. Determination of hydrogen, nitrogen, and methane in gas by combustion in a quartz tube. (With Ira E. Lee.) Proc. Ind. Acad. Sci. for 1912, pp. 215-219; Chem. Eng., XVII, pp. 159-163; Proc. Ind. Gas Asso., V, pp. 28-34. 1913.
28. New methods for the preparation of selenates. (With J. Otto Frank.) Proc. Ind. Acad. Sci. for 1912, pp. 221-223. 1913.
29. A new qualitative test for chlorides in the presence of bromides and iodides. (With Ira E. Lee.) Proc. Ind. Acad. Sci. for 1912, pp. 225-227. 1913.
30. Die Wirkung von Zusatzsubstanzen in galvanoplastischem Bleibädern. (With O. Ralph Overman.) Chemiker-Zeitung, XXXVII, pp. 341-352. 1913.
31. Herstellung von Ueberchloresäure. Chemiker-Zeitung, XXXVII, p. 363. 1913.
32. Preservation of wood with water gas tar. (With J. N. Moncrief.) Gas Age, XXXI, pp. 393-396; Proc. Ind. Gas Asso., V, pp. 22-28. 1913.
33. Laboratory manual for qualitative analysis. Edwards Brothers, Ann Arbor, Mich., pp. 37. 1913.
34. Electrodeposition of lead: a review. Trans. Am. Electrochem. Soc., XXIII, pp. 153-192. 1913.
35. Solid deposits of lead from lead acetate solutions. Trans. Am. Electrochem. Soc., XXIV, pp. 315-329. 1913.
36. Electrodeposition of cadmium, I. (With Hugh M. Marble.) Trans. Am. Electrochem. Soc., XXV, pp. 297-318. 1914.
37. Electrodeposition of cadmium, II. (With Hugh M. Marble.) Trans. Am. Electrochem. Soc., XXV, pp. 319-333. 1914.
38. Electrodeposition of lead from lead acetate solutions. Trans. Am. Electrochem. Soc., XXVI, pp. 99-116. 1914.
39. Electrodeposition of lead from lead lactate and lead formate solutions. (With Barrett W. Coekrum.) Trans. Am. Electrochem. Soc., XXVI, pp. 117-131. 1914.

40. Electrodeposition of tin from tin salts of mineral acids. (With Barrett W. Cockrum.) Trans. Am. Electrochem. Soc., XXVI, pp. 133-135. 1914.
41. Electrodeposition of smooth, solid lead from nitrate solutions. (With Asa McKinney.) Trans. Am. Electrochem. Soc., XXVII, pp. 131-140. 1915.
42. Cleaning solution for glass and porcelain. Chem.-Analyst for April, 1915, p. 10. 1915.
43. Preparation and operation of lead plating baths. Metal Industry, XIII, pp. 184-185. 1915.
44. Laboratory manual for qualitative analysis. Edwards Brothers, Ann Arbor, Mich., pp. 50. 1915.
45. Fluoboric and fluosilicic acids in the qualitative analysis of sodium. (With Clifton O. Stewart, Harley V. Houseman, and Ira E. Lee.) Jour. Am. Chem. Soc., XXXVII, pp. 1515-1517. 1915.
46. Nickel plating. (With Elmer H. Stuart and Earl G. Sturdevant.) Trans. Am. Electrochem. Soc., XXIX, pp. 383-394; Trans. Am. Electroplaters Soc. for 1916. 1916.
47. Addition agents in the electrodeposition of silver from silver nitrate solutions. (With John R. Kuebler.) Trans. Am. Electrochem. Soc., XXIX, pp. 417-432; Metal Industry, XIV, pp. 332-334, 422-423. 1916.
48. Tests in tin plating baths. (With Barrett W. Cockrum.) Trans. Am. Electrochem. Soc., XXIX, pp. 405-410; Metal Industry, XIV, pp. 200-201. 1916.
49. Peptone as an addition agent in stannous ammonium oxalate baths. (With Barrett W. Cockrum.) Trans. Am. Electrochem. Soc., XXIX, pp. 411-416; Metal Industry, XIV, pp. 252-253. 1916.
50. Current efficiencies in nickel plating baths with rotating cathodes. (With Earl G. Sturdevant.) Trans. Am. Electrochem. Soc., XXX, pp. 135-144. 1916.
51. Electrodeposition of antimony from fluoride baths containing addition agents. (With Karl S. Means and B. Frederick Richards.) Trans. Am. Electrochem. Soc., XXXI, pp. 293-301. 1917.
52. Tests of antimony plating baths. (With Karl S. Means.) Trans. Am. Electrochem. Soc., XXXI, pp. 289-291. 1917.
53. Addition agents in the electrodeposition of silver from uncommon silver salts. (With Thomas G. Blue.) Trans. Am. Electrochem. Soc., XXXI, pp. 285-287. 1917.
54. Essential oils as addition agents in plating baths. (With Arthur E. Leible.) Trans. Am. Electrochem. Soc., XXXI, pp. 271-284. 1917.
55. Laboratory manual for qualitative analysis. Edwards Brothers, Ann Arbor Mich., pp. 50. 1917.
56. Antimony plating from the fluoride bath and the testing of other antimony baths. (With Karl S. Means and B. Frederick Richards.) Metal Industry, XV, pp. 197-199. 1917.

57. Experiments with the copper cyanide plating bath. *Trans. Am. Electrochem. Soc.*, XXXIII, pp. 147-154; *Metal Industry*, XVI, pp. 359-360. 1918.
58. Electrolytic refining of tin. U.S. Patent, serial No. 257700, filed Oct. 11, 1918, allowed April 21, 1920. 1918.
59. The preparation of fluorine. (With W. L. Argo, Burr Humiston, and Carl O. Anderson.) *Trans. Am. Electrochem. Soc.*, XXXV, pp. 335-349; *Chem. Eng.*, XXVII, pp. 107-114. 1919.
60. The electrolytic production of fluorine. (With W. L. Argo, Burr Humiston, and Carl O. Anderson.) *Jour. Phys. Chem.*, XXIII, pp. 348-355. 1919.
61. Coloring liquid and method of staining metals. (With Jacob Papish.) U.S. Patent No. 1308092. 1919.
62. Platin-nig—a trade mark for a substance to oxidize silver and to mark brass. (With Jacob Papish.) Registration No. 125827 in U.S. Patent Office. 1919.
63. Apparatus for making fluorine. (With Burr Humiston.) Patent application No. 309254 in U.S. Patent Office. 1919.
64. Method for electrolytically making fluorine. Patent application No. 307674 in U.S. Patent Office. 1919.
65. Laboratory manual for qualitative analysis. Edwards Brothers, Ann Arbor, Mich., pp. 47. 1919.
66. Demonstration of preparation of fluorine. *Trans. Am. Electrochem. Soc.*, XXXVI, pp. 207-212. 1919.
67. Bronze plating. (With Stanley Sowder.) *Trans. Am. Electrochem. Soc.*, XXXVII, pp. 525-528. 1920.
68. New methods of preparing tripotassium lead hydrogen octafluoride. *Jour. Am. Chem. Soc.*, XLII, pp. 1309-1311. 1920.
69. Lead plating from sodium hydroxide lead baths by the use of addition agents. *Trans. Am. Electrochem. Soc.*, XXXVIII, pp. 121-133. 1920.
70. Tin plating from alkaline tin baths by the use of addition agents. (With William H. Bell.) *Trans. Am. Electrochem. Soc.*, XXXVIII, pp. 135-142; *Metal Industry*, XVIII, for Dec. 1920.

CLARENCE EARL MAY, Associate Professor of Chemistry.

A.B., Indiana University, 1904; A.M., 1905; Ph.D., Columbia University, 1908.

1. On the quantitative determination of mucoid in urine, blood, and tissue extracts. (With W. J. Gies.) *Proc. Am. Soc. Biol. Chem.*, p. xlii. 1907.
2. Dissertation concerning some nitrogen and oxygen ethers of the types—C. OR: N—and —C: O. NR in the Quinazoline Series. Eschenbach Printing Co., Easton, Pa., pp. 52. 1908.
3. Assistant editor of Chemical Abstracts, Division Organic Chemistry. Abstracts of 17 papers and monographs on organic chemistry, *Chemical Abstracts*. 1908.
4. On certain quinazoline oxygen ethers. (With Marston T. Bogert.) *Jour. Am. Chem. Soc.*, XXXI, pp. 507-513. 1909.

5. The decomposition of uric acid by means of organic alkaline solvents. (With Hannah Stevens.) Jour. Am. Chem. Soc., XXXIII, pp. 434-447. 1911.
6. Concerning the decomposition of uric acid by means of dilute sodium hydroxide solutions. Jour. Am. Chem. Soc., XXXIII, pp. 1783-1787. 1911.
7. The use of phosphotungstic acid as a clarifying agent in urine analysis. Jour. Biol. Chem., XI, pp. 81-84. 1912.
8. Concerning the sugar content of watermelons. (With Carl P. Sherwin.) Jour. Indust. and Eng. Chem., IV, pp. 585-588. 1912.
9. Laboratory manual of organic chemistry. First mimeo. ed. 1915.
10. Laboratory manual of organic chemistry. Second mimeo. ed. 1917.
11. Laboratory manual of organic chemistry. Third mimeo. ed. 1919.
12. Laboratory manual of physiological chemistry. First mimeo. ed. 1920.

KARL STONE MEANS.

A.B., Butler College, 1914; A.M., Indiana University, 1915.

See Frank C. Mathers, 51, 52, 56.

ALPHEUS RUSSELL NEES.

A.B., Indiana University, 1910; A.M., 1911.

See Oliver W. Brown, 11, 12, 13.

WILLIAM FREDERICK OESTERLE.

A.B., Indiana University, 1903.

See Oliver W. Brown, 6.

OLIVER RALPH OVERMAN.

A.B., Indiana University, 1910; A.M., 1911.

See Frank C. Mathers, 23.

JACOB PAPISH.

A.B., Valparaiso University, 1910; A.M., Indiana University, 1917.

1. Flame reactions. Jour. Phys. Chem., XXII, pp. 430-433. 1918.
2. Flame reactions: Selenium and Tellurium in the hydrogen air flame. Jour. Phys. Chem., XXII, pp. 640-646. 1918.
3. See Frank C. Mathers, 61, 62.

LEO FREDERICK RETTGER.

A.B., Indiana University, 1896; A.M., 1897.

1. Septicæmia in young chickens. New York Med. Jour., May, 1900, p. 803, and Feb., 1901, p. 267. 1901.

B. FREDERICK RICHARDS.

A.B., Indiana University, 1915; A.M., 1916.

See Frank C. Mathers, 51, 56.

GAR A. ROUSH.

A.B., Indiana University, 1905.

1. The electrolytic preparation of iodoform from acetone. Trans. Am. Electrochem. Soc., VIII, p. 281. 1905.

ROY RAY SAYERS.

A.B., Indiana University, 1907; A.M., 1907.

See Oliver W. Brown, 8.

CARL PAXSON SHERWIN.

A.B., Hanover College, 1910; A.M., Indiana University, 1912.

See Clarence E. May, 8.

FREDERICK LAFAYETTE SHINN.

A.B., Indiana University, 1901; A.M., 1902.

See Robert E. Lyons, 13.

LEE THOMAS SMITH.

A.B., Indiana University, 1918.

See Oliver W. Brown, 14.

STANLEY SOWDER.

A.B., Indiana University, 1913; A.M., 1915.

See Frank C. Mathers, 67.

GAIL MIERS STAPP.

A.B., Indiana University, 1912; A.M., 1913.

See Frank C. Mathers, 21.

HANNAH MARY STEVENS.

A.B., Indiana University, 1907; A.M., 1910.

See Clarence E. May, 5.

CLIFTON OLCOTT STEWART.

A.B., Indiana University, 1911; A.M., 1915.

See Frank C. Mathers, 45.

ELMER HENRY STUART.

A.B., Indiana University, 1914; A.M., 1915.

See Frank C. Mathers, 46.

EARL GROVER STURDEVANT.

A.B., Indiana University, 1915; A.M., 1916.

See Frank C. Mathers, 46, 50.

SCHOOL OF COMMERCE AND FINANCE

WILLIAM A. RAWLES, Dean.

A.B., Indiana University, 1884; A.M., 1895; Ph.D., Columbia University, 1903.

1. The government of the people of the state of Indiana. Philadelphia, pp. vi, 172, 12 plates. 1897.
2. Centralizing tendencies in the administration of Indiana. New York, pp. 336. 1903.
3. Review of Norris A. Brisco's 'Economics of business', and Lee Galloway's 'Organization and management'. Am. Econ. Rev., IV, No. 1, pp. 150-152. March, 1914.
4. The income tax as a measure of relief for Indiana. New Haven, Conn., Proc. 10th Ann. Conf. Nat. Tax Asso., pp. 64-87. 1917.
5. Minority report of the special commission on taxation in Indiana. Rep. Com., pp. xv-xxviii. 1916.
6. The tax problem in Indiana. The Hoosier Banker, pp. 33-37. Oct., 1918.
7. Classification of land for purposes of taxation. Proc. Conf. Taxation, Ind. Univ., Ind. Univ. Bull., XII, No. 4, pp. 137-153. 1914.
8. Some principles of taxation. Proc. Conf. Taxation, Indianapolis, Ind. Univ. Bull., XII, No. 15, pp. 8-15. 1915.

DEPARTMENT OF COMPARATIVE PHILOLOGY

GUIDO HERMANN STEMPER, Associate Professor of Comparative Philology.
A.B., State University of Iowa, 1889; A.M., University of Wisconsin, 1894.

1. Sein und haben. *Germania*, III, pp. 132-135. June 1, 1891.
2. Review of Charles F. Johnson's 'English words'. *Sch. and Col.*, I, pp. 255-256. April, 1892.
3. Review of Emil Trechmann's 'A short historical grammar of the German language, translated and adapted from Professor Behaghel's *Deutsche Sprache*'. *Academy*, VII, pp. 308-309. June, 1892.
4. Wilhelm Müller. *Germania*, VI, pp. 14-18. May, 1894.
5. Review of Charles Sears Baldwin's 'The inflections and syntax of the *Morte d'Arthur*'. *Dial*, XVIII, p. 25. Jan. 1, 1895.
6. Review of Francis B. Gummere's 'Old English ballads'. *Dial*, XVIII, p. 87. Feb. 1, 1895.
7. Review of Alfred M. Williams' 'Studies in folk-song and popular poetry'. *Dial*, XVIII, pp. 182-183. March 16, 1895.
8. Review of Oliver Farrar Emerson's 'The history of the English language'. *Sch. Rev.*, III, pp. 229-233. April, 1895.
9. Review of Edward S. Joynes's 'Schiller's Maria Stuart'. *Educ. Rev.*, X, pp. 499-500. Dec., 1895.
10. Review of Walter W. Skeat's 'The student's Chaucer'. *Sch. Rev.*, V, pp. 552-553. Oct., 1897.
11. Review of Hermann B. Boisen's 'Preparatory book of German prose'. *Alumnus*, I, No. 2, pp. 32-33. Nov., 1898.
12. Review of Caroline H. Harding and Samuel B. Harding's 'Greek gods, heroes, and men'. *Alumnus*, I, No. 2, p. 33. Nov., 1898.
13. Review of Carl Osthaus' 'Eichendorff's Aus dem Leben eines Taugenichts'. *Alumnus*, I, No. 2, p. 34. Nov., 1898.
14. Review of Caroline H. Harding and Samuel B. Harding's 'The city of the seven hills'. *Alumnus*, I, No. 3, pp. 35-36. Feb., 1898.
15. Review of Harold W. Johnston's 'Latin manuscripts'. *Alumnus*, I, No. 3, pp. 36-37. Feb., 1898.
16. Review of Edward P. Morton's 'Goldsmith's The vicar of Wakefield'. *Alumnus*, I, No. 4, pp. 24-25. May, 1899.
17. Questions, etc., and a bibliography. Contributed to Marsh and Royster's 'Teachers' manual for the study of English classics'. Chicago, pp. 95. 1902.
18. The Yale bicentennial and comparative philology. Review of Hanns Oertel's 'Lectures on the study of language'; E. Washburn Hopkins' 'India old and new', and the 'The great epic of India'; E. P. Morris' 'On principles and methods in Latin syntax'. *Dial*, XXXIII, pp. 92-94. Aug. 16, 1902.

19. An epoch-remaking book. Review of Edwin Johnson's 'Rise of English culture'. Dial, XXXVII, pp. 304-306. Nov. 16, 1904.
20. Review of Scott-Buck's 'Brief English grammar'. Sch. Rev., XV, pp. 306-307. Feb., 1907.
21. Review of Leonard Bloomfield's 'An introduction to the study of linguistics'. Mod. Lang. Notes, XXXI, pp. 500-501. Dec., 1916.
22. A book of ballads old and new. Selected and edited for schools. English readings for school series. Henry Holt and Co., pp. xxxviii, 329. 1917.
23. Review of Edgar Howard Sturtevant's 'Linguistic change: an introduction to the historical study of language'. Ind. Univ. Alum. Quart., V, pp. 95-96. Jan., 1918.
24. In memoriam: Charles Diven Campbell. Ind. Univ. Alum. Quart., VI, pp. 227-232. April, 1919.

DEPARTMENT OF ECONOMICS AND SOCIOLOGY

JAMES ERNEST MOFFAT, Professor of Economics and Sociology.

A.B., McMaster University, 1914; A.M., University of Chicago, 1916.

1. Review of Frederic C. Howe's 'Socialized Germany'. Jour. Pol. Econ., XXIV, pp. 90-91. Jan., 1916.
2. Review of H. Stanley Jevons' 'The British coal trade'. Jour. Pol. Econ., XXIV, pp. 306-308. March, 1916.
3. About twenty unsigned reviews in Jour. Pol. Econ.

JOHN BURTON PHILLIPS, Professor of Economics and Sociology.

A.B., Indiana University, 1889; A.M., 1891; Ph.D., Cornell University, 1897.

1. Methods of keeping the public money of the United States. Publ. Mich. Pol. Sci. Asso., IV, No. 3, pp. 160. Dec., 1900.
2. Bank and trust company legislation in the United States: supplement to Cator's 'Trust companies'. Johns Hopkins Univ. Studies Hist. and Pol. Sci., Ser. 20, Nos. 5-6, pp. 77-111. May-June, 1902.
3. Comparative summary and index of state legislation in 1901. (With Robert H. Whitten.) N.Y. State Library Bull., No. 69, pp. 813-1230. Dec., 1902.
4. State highway systems. Univ. Colo. Studies, I, No. 3, pp. 189-196. April, 1903.
5. Recent state constitution making. Yale Rev., XII, No. 4, pp. 389-409 (Feb.); Univ. Colo. Studies, II, No. 2, pp. 67-86 (June). 1904.
6. Organization of employers and employees. Bankers' Mag., LXVIII, No. 5, pp. 603-613 (May); Bull. Nat. Metal Trades Asso., III, No. 12 (Dec.); Univ. Colo. Studies, II, No. 3, pp. 159-173 (Dec.). 1904.
7. Modifications of the jury system. Green Bag, XVI, No. 8, pp. 514-520 (Aug., 1904); Univ. Colo. Studies, II, No. 4, pp. 209-219 (June, 1905). 1904-1905.
8. Economics in the high schools. Educ., XXV, No. 7 (March); Investigations, Dept. Psy. and Educ., Univ. of Colo. (June). 1905.
9. Encouragement to industry by exemption from taxation. Quart. Jour. Econ., XIX, No. 3. May, 1905.
10. Teachers' Federations. Boston, Jour. Educ., LXI, Nos. 22, 23. June 1, 8, 1905.
11. Poverty the public school might prevent. Char., XIV, No. 16, pp. 921-925. July 15, 1905.
12. Possibilities of government railroad control. Arena, XXXIV, No. 192, pp. 458-461. Nov., 1905.
13. Sociological effects of the trust. Univ. Colo. Studies, III, No. 1, pp. 5-13. Dec., 1905.
14. Social and industrial effects of railroad rate-making. The Iron Trail (March); Univ. Colo. Studies, III, No. 4, pp. 187-196 (Aug.). 1906.

15. Educational qualifications of voters. Univ. Colo. Studies, III, No. 2. March, 1906.
16. Custody and disbursement of public money (chapter 26 of Bullock's 'Readings in public finance'). Boston, Ginn and Co. Feb., 1906.
17. The divorce problem. Pueblo Chieftain. March 19, 1906.
18. Relation of the course of study to higher wages. Educ., XXVI, No. 8. April, 1906.
19. Significance of the banking situation in Colorado. Univ. Colo. Studies, IV, No. 2, pp. 51-63. Feb., 1907.
20. The increase of divorce. Univ. Colo. Studies, IV, No. 4, pp. 203-217. June, 1907.
21. The habitation tax. Proc. Nat. Tax Asso., I, pp. 168-182. 1907.
22. Scientific assistance in law making. Univ. Colo. Studies, V, No. 1, pp. 5-15. Dec., 1907.
23. A Colorado railroad pool. Univ. Colo. Studies, V, No. 3, pp. 197-220. June, 1908.
24. The population of Colorado. Univ. Colo. Studies, V, No. 4, pp. 197-220. June, 1908.
25. Freight rates and manufactures in Colorado. Univ. Colo. Studies, VII, No. 1, pp. 62. Dec., 1909.
26. The declining birth-rate. Univ. Colo. Studies, VII, No. 3, pp. 159-178. March, 1910.
27. Review of Helen Sumner's 'Equal suffrage'. Econ. Bull., III, No. 3, Sept., 1910.
28. Need of a state tax commission in Colorado. Univ. Colo. Studies, VIII, No. 2, pp. 81-116. Feb., 1911.
29. First annual report of the Colorado tax commission. (With J. Frank Adams and Celsus P. Link.) Denver, pp. 228. Dec., 1912.
30. Some defects of the Colorado tax system. The Civic Quart., Univ. Colo., IV, No. 2, pp. 8. Jan., 1913.
31. Second annual report of the Colorado tax commission. (With J. Frank Adams and Celsus P. Link.) Denver, pp. 151. Dec., 1913.
32. Problems of tax administration in Colorado. The Civic Quart., Univ. Colo., V, No. 2, pp. 10. March, 1914.
33. Legislative and administrative problems in Colorado. Proc. 8th Ann. Conf. Nat. Tax Asso., Denver, pp. 92-97. Sept., 1914.
34. Limitation of public expenditures. Proc. 8th Ann. Conf. Nat. Tax Asso., Denver, pp. 384-385. Sept., 1914.
35. Third annual report of the Colorado tax commission. (With J. Frank Adams and Celsus P. Link.) Denver, pp. 154. Dec., 1914.
36. The public revenue. The Civic Quart., Univ. of Colo., VI, No. 3, pp. 8. May, 1915.
37. Fourth annual report of the Colorado tax commission. (With Celsus P. Link and Edward B. Morgan.) Denver, pp. 162. Dec., 1915.
38. Equalization in Colorado. Bull. Nat. Tax Asso., I, No. 1, pp. 11-13. Feb., 1916.

39. Instructions to county assessors with syllabus of new and amended laws concerned with the administration of the general property tax. (With Celsus P. Link and Edward B. Morgan.) Colorado Tax Commission, pp. 29. Feb., 1916.
40. Shall the state equalization be made by the state tax commission? Bull. Nat. Tax Asso., I, No. 2, p. 45. March, 1916.
41. Limitation of public expenditure. Proc. 10th Ann. Conf. Nat. Tax Asso., Indianapolis, pp. 104-105. Aug., 1916.
42. Equalization. Proc. 10th Ann. Conf. Nat. Tax Asso., Indianapolis, pp. 232-243. Aug., 1916.
43. Centralized control of rebates. Bull. Nat. Tax Asso., I, No. 3, pp. 72-73. April, 1916.
44. Bill initiated to abolish Colorado tax commission. Bull. Nat. Tax Asso., II, No. 1, pp. 22-23. Oct., 1916.
45. Initiated bill to abolish the Colorado commission defeated by the voters. Bull. Nat. Tax Asso., II, No. 2, pp. 48-49. Nov., 1916.
46. Fifth annual report of the Colorado tax commission. (With Celsus P. Link and Edward B. Morgan.) Denver, pp. 264. Dec., 1916.
47. Equalization in Colorado, 1916. Bull. Nat. Tax Asso., II, No. 4, p. 110. Jan., 1917.
48. Review of Fetter's 'Economic principles'. Ind. Univ. Alum. Quart., IV, No. 2, pp. 256-258. April, 1917.
49. Negative results. Bull. Nat. Tax Asso., II, No. 8, p. 227. May, 1917.
50. Review of Lewis E. Young's 'Mine taxation in the United States'. Am. Pol. Sci. Rev., XII, No. 1, pp. 147-150. Feb., 1918.
51. The Indiana tax system. Proc. 12th Ann. Conf. Nat. Tax Asso., Chicago, pp. 85-101. June, 1919.

ULYSSES GRANT WEATHERLY, Professor of Economics and Sociology.

A.B., Colgate University, 1890; Ph.D., Cornell University, 1894; Litt.D., Colgate University, 1910.

1. Louis VI, the founder of the French monarchy. Hamilton, N.Y., pp. 27. 1891.
2. A miniature European state: Liechtenstein. Cornell Mag., VI, pp. 205-208. March, 1894.
3. Comparative politics. Albany, N.Y., pp. 39. 1895.
4. Review of Herbert Tuttle's 'History of Prussia under Frederick the Great, 1756-1757'. Am. Hist. Rev., II, pp. 145-148. Oct., 1896.
5. The relation of history and geography. Ind. Sch. Jour., XLII, pp. 226-251. April, 1897.
6. Recent books on historical method. Inland Educ., V, pp. 247-249. Dec., 1897.
7. Review of Georges Pariset's 'L'état et les églises en Prusse sous Frédéric Guillaume I, 1715-1740'. Am. Hist. Rev., III, pp. 352-355. Jan., 1898.
8. History in the high school. Inland Educ., VI, pp. 261-262. July, 1898.

9. Review of Godefroy Cavaignac's 'La formation de la Prusse contemporaine, 1808-1813'. *Am. Hist. Rev.*, IV, pp. 149-151. Oct., 1898.
10. Stein's German policy at the Congress of Vienna. *Ann. Rep. Am. Hist. Asso. for 1900*, I, pp. 521-534. 1901.
11. Why charities ought to be organized. *Ind. Bull. Char. and Corr.*, pp. 91-92. June, 1902.
12. Outlines of sociology. Indianapolis, pp. 34. 1906.
13. Babeuf's place in the history of socialism. *Papers of the Am. Econ. Asso.*, 3d Ser., VIII, No. 1, pp. 113-124.
14. Training for social workers. *Ind. Bull. Char. and Corr.*, June, 1907, pp. 178-180. 1908.
15. The juvenile delinquent. *The Teachers' Jour.*, pp. 261-266. Nov., 1907.
16. Review of Karl Lamprecht's 'Deutsche Geschichte, siebenter Band, erste Haelfte'. *Am. Hist. Rev.*, XI, pp. 653-654. April, 1906.
17. Review of Karl Lamprecht's 'Deutsche Geschichte, neunter Band'. *Am. Hist. Rev.*, XIII, pp. 351-353. Jan., 1908.
18. Review of Karl Lamprecht's 'Deutsche Geschichte, zehnter Band'. *Am. Hist. Rev.*, XIII, pp. 872-874. July, 1908.
19. Review of William B. Guthrie's 'Socialism before the French revolution: a history'. *Am. Hist. Rev.*, XIII, pp. 346-347. Jan., 1908.
20. Review of William Graham Sumner's 'Folkways: a study of the sociological importance of usages, manners, customs, mores, and morals'. *Econ. Bull.*, I, pp. 58-60. April, 1908.
21. Review of Lewis H. Morgan's 'Ancient society'. *Econ. Bull.*, I, pp. 65-66. April, 1908.
22. Review of William I. Thomas' 'Sex and society'. *Econ. Bull.*, I, pp. 155-157. June, 1908.
23. Review of Hutton Webster's 'Primitive secret societies'. *Econ. Bull.*, I, pp. 151-154. June, 1908.
24. Review of Jerome Dowd's 'The negro races: a sociological study, Vol. I'. *Econ. Bull.*, I, pp. 234-235. Sept., 1908.
25. Review of Maurice Parmelee's 'The principles of anthropology and sociology in their relations to criminal procedure'. *Econ. Bull.*, I, pp. 344-345. Dec., 1908.
26. Race friction between blacks and whites in the United States. *Publ. Am. Sociol. Soc.*, II, pp. 93-95, 1907; *Am. Jour. Sociol.*, XIII, pp. 823-825. May, 1908.
27. How does the access of women to industrial occupations react on the family? *Publ. Am. Sociol. Soc.*, III, pp. 124-136. 1908.
28. Review of Alfred Holt Stone's 'Studies in the American race problem'. *Econ. Bull.*, II, pp. 60-62. April, 1909.
29. Review of W. E. Burghardt Du Bois' 'Economic coöperation among negro Americans'. *Econ. Bull.*, II, pp. 62-64. April, 1909.
30. Joint editor of the *Economic Bulletin*, in charge of the department of Anthropology and Ethnography.

31. The access of women to industrial occupations. *Am. Jour. Sociol.*, XIV, pp. 740-752. May, 1909.
32. Review of 'The south African natives: their progress and present condition'. *Econ. Bull.*, II, pp. 166-168. June, 1909.
33. Review of Basil Thomson's 'The Fijians: a study of the decay of custom'. *Econ. Bull.*, II, pp. 274-275. Sept., 1909.
34. Review of William P. Pickett's 'The negro problem: Abraham Lincoln's solution'. *Econ. Bull.*, II, pp. 391-393. Dec., 1909.
35. Race and marriage. *Am. Jour. Sociol.*, XV, pp. 433-453. Jan., 1910.
36. Review of W. E. Burghardt Du Bois' 'The negro American family'. *Econ. Bull.*, III, pp. 62-63. March, 1910.
37. Review of Shridhar V. Ketkar's 'The history of caste in India'. *Econ. Bull.*, III, pp. 62-63. March, 1910.
38. Review of William I. Thomas' 'Source book for social origins'. *Econ. Bull.*, III, pp. 182-184. June, 1910.
39. The Indiana child labor committee. *Ind. Bull. Char. and Corr.*, pp. 241-244. June, 1910.
40. Review of Booker T. Washington's 'The story of the negro'. *Econ. Bull.*, III, pp. 305-306. Sept., 1910.
41. Indiana's child labor problem. *Ind. Bull. Char. and Corr.*, pp. 335-338. Dec., 1910.
42. Review of A. H. Keane's 'The world's peoples'. *Econ. Bull.*, III, pp. 437-438. Dec., 1910.
43. Review of Hans Mähl's 'Die Ueberleitung Preussens in das konstitutionelle System'. *Am. Hist. Rev.*, XVI, pp. 389-390. Jan., 1911.
44. The racial element in social assimilation. *Publ. Am. Sociol. Soc.*, V, pp. 57-76, 1911; *Am. Jour. Sociol.*, XVI, pp. 593-612. March, 1911.
45. Review of H. J. Nieboer's 'Slavery as an industrial system'. *Am. Econ. Rev.*, I, pp. 327-329. June, 1911.
46. Review of B. L. Putnam Weale's 'The conflict of color'. *Ann. Am. Acad. Pol. and Sociol. Sci.*, XXXVIII, pp. 313-315. July, 1911.
47. The first universal races congress. *Am. Jour. Sociol.*, XVII, pp. 315-328. Nov., 1911.
48. A world-wide color line. *Pop. Sci. Mo.*, LXXIX, pp. 474-485. Nov., 1911.
49. Organized progress. *Ind. Bull. Char. and Corr.*, pp. 111-117. June, 1912.
50. Review of Samuel George Smith's 'Social pathology'. *Am. Econ. Rev.*, II, pp. 682-683. Sept., 1912.
51. Review of Edward A. Ross' 'Changing America'. *Am. Jour. Sociol.*, XVIII, pp. 267-270. Sept., 1912.
52. The Indiana children's bureau. *Ind. Bull. Char. and Corr.*, pp. 420-422. Dec., 1912.
53. Report of the (Indiana) commission on industrial and agricultural education. (With John A. Lapp and others.) Indianapolis, William B. Burford, state printer, pp. 133. 1912.

54. Lester Frank Ward. *Am. Jour. Sociol.*, XIX, pp. 68-71. July, 1913.
55. Review of Paul Leroy-Beaulieu's 'La question de population'. *Am. Econ. Rev.*, III, pp. 958-959. Dec., 1913.
56. Review of Jan St. Lewinski's 'The origin of property and the formation of the village community'. *Am. Econ. Rev.*, IV, pp. 125-126. March, 1914.
57. Review of Frederick Adams Woods' 'The influence of monarchs'. *Am. Econ. Rev.*, IV, pp. 120-122. March, 1914.
58. Review of John Daniel's 'In freedom's birthplace: a study of the Boston negroes'. *Am. Jour. Sociol.*, XX, pp. 121-123. July, 1914.
59. Review of Thorstein Veblen's 'The instinct of workmanship'. *Am. Econ. Rev.*, IV, pp. 860-861. Dec., 1914.
60. Freedom of teaching in the United States. *Publ. Am. Sociol. Soc.*, IX, pp. 133-149. 1914.
61. Review of Franz Oppenheimer's 'The state, its history and development viewed sociologically'. *Am. Econ. Rev.*, V, pp. 62-63. March, 1915.
62. Review of William August Crossland's 'Industrial conditions among negroes in St. Louis'. *Am. Jour. Sociol.*, XXI, pp. 114-115. July, 1915.
63. General report of the committee on academic freedom and academic tenure. (With E. R. A. Seligman and others.) *Bull. Am. Asso. Univ. Prof.*, pp. 17-43. Dec., 1915.
64. Review of J. A. Bigham's 'Select discussions in race problems'. *Am. Jour. Sociol.*, XXII, p. 419. Nov., 1916.
65. Review of Emile Durkheim's 'The elementary forms of the religious life'. *Am. Jour. Sociol.*, XXII, pp. 561-563. Jan., 1917.
66. Review of George R. Davis' 'Social environment'. *Am. Jour. Sociol.*, XXIII, p. 558. Jan., 1918.
67. Review of Maurice Parmelee's 'Personality and conduct'. *Am. Jour. Sociol.*, XXIX, pp. 220-221. Sept., 1918.
68. Educational publicity. *Sci. Mo.*, VIII, pp. 146-159. Feb., 1919.
69. The dynamic of youth. *Ind. Univ. Alum. Quart.*, VI, No. 3, pp. 332-349. July, 1919.
70. Democracy and our political system. *Publ. Am. Sociol. Soc.*, XIV, pp. 23-35. 1919.

SCHOOL OF EDUCATION

HUBERT GUY CHILDS, Professor of Secondary Education.

B.S., University of Minnesota, 1897; A.M., Leland Stanford Junior University, 1911; Ph.D., Columbia University, 1918.

1. A tentative revision and extension of the Binet-Simon measuring scale of intelligence. (With Lewis M. Terman.) *Jour. Educ. Psy.*, III, pp. 61-74, 133-143, 198-208, 277-289. Feb., March, April, May, 1912.
2. Measurement of the drawing ability of two thousand one hundred and seventy-seven children in Indiana school systems by a supplemented Thorndike scale. *Jour. Educ. Psy.*, VI, pp. 391-408. Sept., 1915.
3. The social emphasis in history instruction (abstract). *Ind. Univ. Bull.*, XIII, No. 10, pp. 55-59. 1915.
4. A half-year's progress in the achievement of one school system. *Fifteenth Year Book, Nat. Soc. Study of Educ.*, Pt. I, pp. 79-90. 1916.
5. The results of practice teaching as conducted at the University of Indiana for the years 1908-09 to 1913-14 inclusive. *Educ. Monographs*, No. VII, *Soc. of Col. Teachers of Educ.*, pp. 23-26. 1916.
6. Cost of instruction in Indiana high schools and related data. *Ind. Univ. Ext. Div. Bull.*, II, No. 6, pp. 126-170. Feb., 1917.
7. The measurement of achievement in algebra. *Ind. Univ. Ext. Div. Bull.*, II, No. 6, pp. 171-183. Feb., 1917.
8. A study of enrollment, acceleration, retardation, and normality in high schools. *Ind. Univ. Ext. Div. Bull.*, II, No. 6, pp. 184-187. Feb., 1917.
9. The per cent of failures in high schools. *Ind. Univ. Ext. Div. Bull.*, II, No. 6, pp. 188-191. Feb., 1917.
10. The reorganization movement in the grammar grades of Indiana public schools. *Bloomington, Ind.*, pp. 187. 1918.
11. Reorganization in the grammar grades of Indiana public schools. *Educ.-Jour.*, XIX, pp. 7-16. Sept., 1918.

HENRY LESTER SMITH, Dean, and Professor of School Administration.

A.B., Indiana University, 1898; A.M., 1899; A.M., Columbia University, 1910; Ph.D., 1916.

1. Indiana man tells truth about conditions in canal zone and says Uncle Sam need not be ashamed of his big ditch. *Indianapolis Sunday Star*, VI, No. 24, p. 9. Jan. 31, 1909.
2. A partially neglected factor in the training for the teaching profession. *Educ.-Jour.*, XII, pp. 460-462. May, 1912.
3. The vocational survey as the first step in the organization of a special vocational department or school. *Educ.-Jour.*, XIV, pp. 193-198. Dec., 1913.
4. Plans for organizing school surveys. *13th Year Book Nat. Soc. Study of Educ.*, Pt. II, pp. 7-68. 1914.

5. A survey of a public school system. Teachers College, Columbia University, pp. 304. 1917.
6. The underground railroad in Monroe county. Ind. Mag. Hist., XIII, pp. 288-297. Sept., 1917.
7. Law as a vocation. Publ. Fed. Board for Voc. Educ., Div. Voc. Rehabilitation, Opportunity Monographs Ser. No. 16, pp. 11. Jan., 1919.
8. Medicine as a vocation. Publ. Fed. Board for Voc. Educ., Div. Voc. Rehabilitation, Opportunity Monographs Ser. No. 17, pp. 8. Jan., 1919.
9. Journalism as a vocation. Publ. Fed. Board for Voc. Educ., Div. Voc. Rehabilitation, Opportunity Monographs Ser. No. 18, pp. 10. Jan., 1919.
10. Teaching as a vocation. Publ. Fed. Board for Voc. Educ., Div. of Voc. Rehabilitation, Opportunity Monographs Ser. No. 22, pp. 14. Feb., 1919.
11. Plans for saving time in grades VII-XII, inclusive. Ind. Univ. Ext. Div. Bull., IV, No. 4, pp. 74-91. Dec., 1918.
12. A patriotic reader. (With others.) Houghton Mifflin Company, pp. 194. 1917.
13. Berry speller. (With others.) B. D. Berry Company, pp. 282. 1920.

DEPARTMENT OF ENGLISH

MAURICE GARLAND FULTON, Assistant Professor of English.

Ph.B., University of Mississippi, 1898; A.M., 1901.

1. Manual of exercises in English composition. (With R. A. Abbott.) Wahr, pp. 200. 1905.
2. Expository writing. Macmillan, pp. 555. 1912.
3. College life, its conditions and problems. Macmillan, pp. 524. 1914.
4. Questions on readings in English literature. (With R. G. Bressler and G. H. Mullen.) Century, pp. 118. 1915.
5. Southern life in southern literature. Ginn, pp. 530. 1916.
6. 'Christmas night in the quarters' and other poems by Irwin Russell. Century, pp. 182. 1917.
7. National ideals and problems. Macmillan, pp. 415. 1918.
8. Bryce on American democracy. Macmillan, pp. 338. 1919.
9. Roosevelt's writings. Macmillan, pp. 354. 1920.

WILL TALIAFERRO HALE, Assistant Professor of English.

A.B., Vanderbilt University, 1902; A.M., 1902; B.D., Yale University, 1905; A.M., Columbia University, 1912; Ph.D., Yale University, 1914.

1. 'Of reformation touching church-discipline in England and the causes that hitherto have hindred it', by John Milton. Edited with introduction, notes, and glossary. Yale Studies in English, No. 54, pp. lxxxix, 224. 1916.
2. Madame D'Arblay's place in the development of the English novel. Ind. Univ. Studies, No. 28, pp. 35. Jan., 1916.
3. Lesson outlines on 'Browning: how to know him'. Bobbs-Merrill, pp. 24. 1916.
4. Review of Solomon F. Gingerich's 'Shelley's doctrine of necessity versus Christianity'. Ind. Univ. Alum. Quart., VII, No. 2, pp. 272-273. April, 1920.

JOHN DOUGAN REA, Professor of English.

A.B., Yale University, 1903; A.M., 1905; Ph.D., 1918.

1. Ben Jonson's 'Volpone'. Edited with introduction, glossary, and notes. New Haven and Oxford, pp. 11, 254. 1919.
2. A source for the storm in 'The tempest'. Mod. Philol., XVII, No. 5, p. 279. Sept., 1919.
3. Jaques in praise of folly. Mod. Philol., XVII, No. 8, p. 465. Dec., 1919.
4. The location of Shakespeare's island. Mod. Lang. Notes, XXXV, No. 5, p. 313. May, 1920.
5. Notes on Shakespeare. Mod. Lang. Notes, XXXV, No. 6, p. 377. June, 1920.
6. Longfellow's 'Nature'. Mod. Philol., XVIII, No. 1, p. 48. May, 1920.

HENRY THEW STEPHENSON, Professor of English.

B.S., Ohio State University, 1894; A.B., Harvard University, 1898.

1. Patroon Van Valkenberg. Indianapolis, Bobbs-Merrill, pp. 360. 1901.
2. The fickle wheel. Indianapolis, Bobbs-Merrill, pp. 380. 1901.
3. Shakspeare's London. New York, Henry Holt, pp. vi, 357. 1905.
4. The Elizabethan people. New York, Henry Holt, pp. xi, 412. 1909.
5. A handbook of Shakspeare. New York, Henry Holt, pp. ix, 300. 1914.
6. Christie Bell. Indianapolis, Federal Publishing Co., pp. 378. 1918.

DEPARTMENT OF FINE ARTS

ALFRED MANSFIELD BROOKS, Professor of Fine Arts.

A.B., Harvard University, 1894; A.M., 1899.

1. Decoration of schoolrooms. *Inland Educ.*, IX, pp. 272-274; *Ind. Sch. Jour.*, XLV, pp. 29-32. Jan., 1900.
2. The study of art in universities. *Educ.*, XXI, pp. 364-371. Feb., 1901.
3. The nude in art. *Louisville Post*. March, 1901.
4. On the teaching of art in universities. *Proc. Western Drawing Teachers' Asso.* 1903.
5. Review of Charles Holroyd's 'Michael Angelo Buonarroti'. *Dial.* 1904.
6. Review of William Bayne's 'Sir David Wilkie'. *Dial.* 1904.
7. Review of Arthur B. Chamberlain's 'Thomas Gainsborough'. *Dial.* 1904.
8. Architecture. *International Art Asso. Chicago, Progress*, 3, No. 8, pp. 155-189. 1900.
9. The Newell fortune. London, John Lane, pp. v, 304. 1906.
10. Somes House. London, Swan, Sonnenschein and Co., pp. ii, 188. 1909.
11. Great cartoonists of the past. *Cartoons*. Jan., 1913.
12. Alfred Rethel's dance of death. *World Peace Foundation*. May, 1914.
13. Architecture and the allied arts. *Bobbs-Merrill*, pp. 259. 1914.
14. Lending museums. *Arts and Progress*. April, 1915.
15. Ypres, Louvain, and Malines. *Art and Archaeology*. Jan., 1916.
16. Leaf and flower drawing. *Art and Archaeology*. March, 1916.
17. How city gardeners could coöperate with the public schools. *American City*. June, 1916.
18. New 'old' poetry. *The Dial*. June 8, 1916.
19. Imagination in giving. *New York Evening Post*. Dec. 28, 1916.
20. Dante, how to know him. *Bobbs-Merrill*, pp. 387. 1916.
21. How shall we teach something about art? *Jour. of Am. Inst. of Archaeology*. April, 1917.
22. A note on plant drawing. *Art and Archaeology*. May, 1917.
23. College English teaching. *Sch. and Soc.* June 2, 1917.
24. The art and work of Theodore Steele. *Am. Mag. Art*. Aug., 1917.
25. Architecture as an academic subject. *3d. Bull. of the Col. Art. Asso. of Am.* 1917.
26. English drawings and water colors at Indiana University. *Art in Am.* April, 1918.
27. Tests for 'converted and secret americans'. *New York Times*. April 7, 1918.
28. Shall Germans teach French? *North Am. Rev.* Oct., 1918.

29. Paintings by Martin Mower. Ehrich Galleries Catalogue. April, 1919.
30. Great artists and their works by great authors. Marshall Jones, pp. xiv, 267. 1919.
31. The house of the singing winds. Am. Mag. Art. Feb., 1920.
32. Posters and advertisements. Ind. Univ. Alum. Quart., VII, No. 2, pp. 179-182. April, 1920.
33. From Holbein to Whistler: notes on drawing and engraving. The Yale University Press, pp. 194. 1920.

ROBERT E. BURKE, Associate Professor of Fine Arts.

Graduate of Pratt Institute, 1907; A.B., Indiana University, 1913; A.M., 1914.

1. An introduction to the study of pictures. Educ., XXXVI, No. 8, pp. 493-503. April, 1916.
2. Keats and Giorgione—a parallel. Art and Archaeology, V, No. 3, pp. 133-135. March, 1917.

DEPARTMENT OF GEOLOGY

HALBERT PLEASANT BYBEE.

A.B., Indiana University, 1912; A.M., 1913; Ph.D., 1915.

1. See Clyde A. Malott, 1.

HORACE NOBLE CORYELL.

A.B., Indiana University, 1914; A.M., 1915.

1. Correlation of the outcrop at Spades, Indiana! Proc. Ind. Acad. Sci. for 1914, pp. 389-393. 1915.
2. Soil survey of Howard county, Indiana. 39th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 20-54, map. 1915.
3. A study of the collections from the Trenton and Black river formations of New York. Proc. Ind. Acad. Sci. for 1915, pp. 249-268. 1916.

EDGAR ROSCOE CUMINGS, Professor of Geology.

A.B., Union College, 1897; Ph.D., Yale University, 1903.

1. Sections and thickness of the Lower Silurian formations on West Canada creek and in the Mohawk valley. (With C. S. Prosser.) 15th Ann. Rep. State Geol. N. Y., pp. 619-659, 13 plates, 3 text-figures. 1897.
2. Lower Silurian system of eastern Montgomery county, New York. Bull. N. Y. State Mus., VII, No. 34, pp. 419-468, 4 plates, 4 maps. 1900.
3. On the Waldron fauna at Tarr Hole, Indiana. Proc. Ind. Acad. Sci. for 1899, pp. 174-176. 1900.
4. The stream gradients of the lower Mohawk valley. Proc. Ind. Acad. Sci. for 1899, pp. 176-178. 1900.
5. Notes on the Ordovician rocks of southern Indiana. Proc. Ind. Acad. Sci. for 1900, pp. 200-215. 1901.
6. Some developmental stages of *Orthothetes minutus* n. sp. Proc. Ind. Acad. Sci. for 1900, pp. 216-218. 1901.
7. *Orthothetes minutus* n. sp. from the Salem limestone of Harrodsburg, Indiana. Am. Geol. XXVII, pp. 147-149, 1 plate. March, 1901.
8. The use of Bedford as a formational name. Jour. of Geol., IX, pp. 232-233. 1901.
9. A section of the upper Ordovician at Vevay, Indiana. Am. Geol., XXVIII pp. 361-381, 2 plates. Dec., 1901.
10. A revision of the bryozoan genera Dekayia, Dekayella, and Heterotrypa of the Cincinnati group. Am. Geol., XXIX, pp. 197-217, 4 plates. April, 1902.
11. A quantitative study of variation in the fossil brachiopod *Platystrophia lynx*. (With Abram V. Mauck.) Am. Jour. Sci., XIV, pp. 9-16, 2 plates, 1 text-figure. July, 1902.

12. The morphogenesis of *Platystrophia*: a study of the evolution of a Paleozoic brachiopod. *Am. Jour. Sci.*, XV, pp. 1-48, 121-136, 27 text-figures. Jan., Feb., 1903.
13. Review of E. J. Conklin's 'The embryology of a brachiopod, *Terebratulina septentrionalis*, Couthouy'. *Am. Nat.*, XXXVII, No. 434, pp. 121-122. Feb., 1903.
14. Review of E. S. Morse's 'Observations on living Brachiopoda'. *Am. Nat.*, XXXVII, No. 434, pp. 122-123. Feb. 1903.
15. Review of Naohide Yatsu's 'On the development of *Lingula anatina*'. *Am. Nat.*, XXXVII, No. 434, pp. 123-124. Feb., 1903.
16. Review of Naohide Yatsu's 'Notes on the histology of *Lingula anatina* Bruguiere'. *Am. Nat.*, XXXVII, No. 434, p. 124. Feb., 1903.
17. Development of some Paleozoic Bryozoa. *Am. Jour. Sci.*, XVII, pp. 49-78, 83 text-figures. Jan., 1904.
18. The Waverly formations of central Ohio. (With C. S. Prosser.) *Am. Geol.*, XXXIV, pp. 335-361, 3 plates. 1904.
19. Development of *Fenestella*. *Am. Jour. Sci.*, XX, pp. 169-177, 3 plates. 1905.
20. On the weathering of the Subcarboniferous limestones of southern Indiana. *Proc. Ind. Acad. Sci. for 1906*, pp. 85-110, 22 figures. 1907.
21. Fauna of the Salem limestone of Indiana. (With J. W. Beede and others.) 30th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 1189-1486, 47 plates. 1906.
22. The stratigraphy and paleontology of the Cincinnati series of Indiana. 32d Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 607-1189, 55 plates, 16 text-figures, 6 maps. 1908.
23. Paleontology and the recapitulation theory. *Proc. Ind. Acad. Sci.*, 25th anniversary meeting, 1909, pp. 305-340. 1910.
24. Paleontology and the recapitulation theory. *Pop. Sci. Mo.*, Sept., 1910, pp. 298-304; *Paleontological Soc. Conf. on the aspects of paleontology*, Washington, D. C., pp. 57-63.
25. The development and systematic position of the Monticuliporoids. *Bull. Geol. Soc. Am.*, XXIII, pp. 357-370, 4 plates. 1912.
26. The *Batostomas* of the Richmond series of Indiana. (With J. J. Galloway.) *Proc. Ind. Acad. Sci. for 1911*, pp. 147-166, 7 plates. 1912.
27. The geological conditions of municipal water supply in the driftless area of southern Indiana. *Proc. Ind. Acad. Sci. for 1911*, pp. 111-146, 9 figures. 1912.
28. Some geological conditions of water supply in Indiana. *Proc. Ind. Sanitary and Water Supply Asso. for 1913*, pp. 157-162. 1914.
29. The stratigraphy and paleontology of the Tanner's creek section of the Cincinnati series of Indiana. (With Jesse J. Galloway.) 37th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 353-478, 18 figures, 20 plates, 2 sections, 1 profile and map. 1913.

30. Studies of the morphology and histology of the Trepotomata or Monticuliporoids. (With Jesse J. Galloway.) Geol. Soc. Am. Bull., XXVI, No. 3, pp. 349-374, 6 plates. 1915.
31. Description of the Columbus quadrangle, Ohio. (With G. D. Hubbard, J. A. Bownocker, C. R. Stauffer, and C. S. Prosser.) U.S. Geol. Surv., Geol. Atlas, Columbus Folio (No. 197), pp. 15, 3 maps, 2 illustration sheets, 10 figures, 1915; field edition, pp. 116, 8 plates, 10 figures, maps. 1915.
32. What provisions should be employed to enlist in behalf of scholarship the interest and ambitions of the ablest students? Proc. 19th Ann. Conf. Asso. Am. Univ., at Iowa City, Iowa, Nov. 9-10, 1917, pp. 50-63. 1918.
33. Memorial of Charles Smith Prosser. Geol. Soc. Am. Bull., XXVIII, No. 1, pp. 70-80. (Includes bibliography of Charles S. Prosser.) 1917.
34. Review of the following papers by Dr. Edward M. Kindle: 'Recent and fossil ripple marks'; 'Small pit and mound structures developed during sedimentation'; 'Some factors affecting the development of mud cracks'; 'Fossil collecting'; 'Notes on Devonian faunas of the Mackenzie river valley'. Ind. Univ. Alum. Quart., IV, No. 3, pp. 427-428. July, 1917.
35. Review of Willis S. Blatchley's 'A century of geology in Indiana'. Ind. Univ. Alum. Quart., VI, No. 2, pp. 266-267. April, 1919.
36. The age of the earth and the antiquity of life. Ind. Univ. Alum. Quart., VII, No. 1, pp. 23-39. Jan., 1920.
37. Review of John Casper Branner's 'Outlines of the geology of Brazil to accompany the geologic map of Brazil'. Ind. Univ. Alum. Quart., VIII, No. 1, pp. 76-77. Jan., 1920.

JESSE JAMES GALLOWAY.

A.B., Indiana University, 1909; A.M., 1911, Ph.D., 1913.

1. See Cumings, 26, 29, 30.
2. The geology of Rutherford county, Tennessee. Tenn. Geol. Surv. Rep. 1918.

FRANK COOK GREENE.

A.B., Indiana University, 1908; A.M., 1909.

1. Fauna of the Florena shales of the Grand Summit section of Kansas, and remarks on the development of *Derbya multistriata* Meek and Hayden. Proc. Ind. Acad. Sci. for 1907, pp. 114-127, 3 plates. 1908.
2. The development of a carboniferous Brachiopod, *Chonetes granulifer* Owen. Jour. Geol., XVI, pp. 654-663, 4 plates. 1908.
3. Ferns of Bloomington, Indiana. Fern Bull. Oct., 1908.
4. Notes on the ferns of southern Indiana. Fern Bull. 1908.
5. The Permian-Cretaceous contact in northern Kansas. Kan. Univ. Sci. Bull., V, No. 1, pp. 1-8, 4 plates. 1910.
6. Caves and cave formations of the Mitchell limestone. Proc. Ind. Acad. Sci. for 1908, pp. 175-184, 8 figures. 1909.

7. The Huron group of western Monroe and eastern Greene counties, Indiana. *Proc. Ind. Acad. Sci.* for 1910, pp. 269-288, 9 figures. 1911.

THOMAS F. JACKSON.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1916.

1. Report on Pennsylvanian or coal measures. 39th Rep., Dept. Geol. and Nat. Res. Ind., pp. 224-229. 1915.
2. The paleobotany of the Bloomington, Indiana, quadrangle. *Proc. Ind. Acad. Sci.* for 1914, pp. 395-398. 1915.
3. The description and stratigraphic relationships of the fossil plants from the lower Pennsylvanian rocks of Indiana. *Proc. Ind. Acad. Sci.* for 1916, pp. 405-439, 10 plates, 1 map, 1 text-figure. 1917.

WILLIAM NEWTON LOGAN, Professor of Geology.

A.B., University of Kansas, 1896; A.M., 1896; Ph.D., University of Chicago, 1900.

1. The temperature sense. *Kan. Univ. Quart.*, III, pp. 200-204. 1895.
2. The upper Cretaceous of Kansas. *Univ. Geol. Surv., Kan.*, II, pp. 195-235, 5 plates. 1896.
3. Some new cirripede crustaceans from the Niobrara Cretaceous of Kansas. *Kan. Univ. Quart.*, VI, pp. 187-189. 1897.
4. The invertebrates of the Benton, Niobrara, and Ft. Pierre groups. *Univ. Geol. Surv. Kan.*, IV, Paleontology, Pt. 1, pp. 430-519, 31 plates. 1898.
5. A discussion and correlation of certain subdivisions of the Colorado formation. *Jour. Geol.*, VII, pp. 83-91. 1899.
6. Contribution to the paleontology of the upper Cretaceous series. *Field Columbian Mus., Publ.* 36, I, 6, pp. 206-217, 5 plates. 1899.
7. Some additions to the Cretaceous invertebrates of Kansas. *Kan. Univ. Quart.*, VIII, pp. 87-98, 4 plates. 1899.
8. Review of Ward's 'Cretaceous of the Black Hills'. *Jour. Geol.*, VII, 8, pp. 814-815. 1899.
9. Review of Peach's (and others') 'The Silurian rocks of Great Britain'. *Jour. Geol.*, VIII, 1, pp. 77-79. 1900.
10. The stratigraphy and invertebrate faunas of the Jurassic in the Freeze-Out Hills of Wyoming. *Kan. Univ. Quart.*, IX, pp. 109-134, 8 plates. 1900.
11. Review of Gannett's 'Forest reserves'. *Jour. Geol.*, VIII, 4, pp. 376-377. 1900.
12. A North American epicontinental sea of Jurassic age. *Jour. Geol.*, VIII, pp. 241-273, 2 plates. 1900.
13. Review of Lozé's 'Les charbons britanniques et leur epuishment'. *Jour. Geol.*, VIII, 3, pp. 291-293. 1900.
14. The economic products of St. Lawrence county, New York. *Rep. Director and State Geologist*, pp. r118-r124. 1902.
15. Geology of Oktibbeha county, Mississippi. *Geol. and Indust. Surv. Miss. Rept.*, I, pp. 1-67, 10 plates, 1 map. 1903.

16. A preliminary report on some of the clays of Mississippi. Geol. and Indust. Surv. Miss., Bull. No. 3, pp. 1-89, 16 plates, 2 maps. 1904.
17. The underground waters of Mississippi. Miss. Agr. Exp. Sta. Bull., 89, pp. 1-112, 19 plates, 4 maps. 1905.
18. A circular on the underground waters of Mississippi. Miss. Agr. Exp. Sta. Circ. 16, pp. 1-17, 14 figures, 1 map. 1906.
19. Clays of Mississippi: brick clays of northern Mississippi. Miss. Geol. Surv. Bull. 2, pp. 1-256, 40 plates, 14 figures, 1 map. 1907.
20. Clays of Mississippi: brick clays of southern Mississippi. Miss. Geol. Surv., Bull. 4, pp. 1-73, 17 plates, 1 map. 1908.
21. Pottery clays of Mississippi. Miss. Geol. Surv., Bull. 6, pp. 1-229, 45 plates, 13 maps. 1909.
22. A preliminary report on the structural materials of Mississippi. Miss. Geol. Surv., Bull. 9, pp. 1-79, 17 plates. 1911.
23. Laboratory studies in geology, historical geology. Miss. Agr. and Mech. Col., Bull. XI, No. 1, pp. 1-42. 1914.
24. Laboratory studies in geology, physical geology. Bull. XI, No. 4, 1914, Miss. Agr. and Mech. Col., pp. 1-13. 1914.
25. The soils of Mississippi. Miss. Agr. Exp. Sta., Tech. Bull., 7, pp. 1-85, 14 plates, 2 maps. 1916.
26. A preliminary report on the marls and limestones of Mississippi. Miss. Geol. Surv., Bull. 13, pp. 1-83, 7 plates. 1916.
27. Certain indicia of dip in rocks. Proc. Ind. Acad. Sci. for 1917, pp. 229-234. 1918.
28. The Mt. Carmel fault. Proc. Ind. Acad. Sci. for 1917, pp. 221-226. 1918.
29. Utilization of Indiana kaolin. Proc. Ind. Acad. Sci. for 1917, p. 227. 1918.
30. The occurrence of coal in Monroe county. Proc. Ind. Acad. Sci. for 1918, pp. 172-176. 1919.
31. The occurrence of Indianaite in Monroe county. Proc. Acad. Sci. for 1918, pp. 177-182. 1919.
32. Bio-chemical theory of the origin of Indianaite. Sci., N.S., XLVIII. 1918.
33. Mineral resources of Indiana. Am. Inst. of Mining and Metall. Eng. Guide Book, pp. 1-64, maps, illustrations. 1919.
34. The raw materials of Indiana. Chem. and Metall. Eng., XXI, No. 6, pp. 320-324, 1 map, 2 figures. 1919.
35. Kaolin of Indiana. Publ. 6, Div. Geol., Ind. Dept. Cons., pp. 1-131, 110 figures, 8 plates, 8 maps. 1919.
36. Report of the Division of Geology. Rep. Ind. Dept. Cons., pp. 9-14. 1919.
37. Distribution and uses of Indiana kaolin. Rep. Ind. Dept. Cons., pp. 14-22. 1919.
38. Mineral resources of Indiana. Rep. Ind. Dept. Cons., pp. 22-27. 1919.

39. Waste in coal mining in Indiana. Rep. Ind. Dept. Cons., pp. 33-36. 1920.
40. Topographic mapping in Indiana. Rep. Ind. Dept. Cons., pp. 36-40. 1920.
41. Division of Geology: one hundred years of Indiana's resources. Rep. Ind. Dept. Cons., pp. 14-18, 1 map. 1920.
42. Petroleum and natural gas in Indiana. Publ. 8, Div. Geol. Ind. Dept. Cons., pp. 279. 1920.
43. Standardize the word 'geologist'. Oil News, VIII, 12, p. 24. 1920.
44. Indiana oil and gas fields. Oil News, VIII, 17, p. 21. 1920.
45. A survey of the natural resources of Indiana. Ind. Dept. Cons., pp. 17-28, 53-92. 1920.

CLYDE ARNETT MALOTT, Associate Professor of Geology.

A.B., Indiana University, 1913; A.M., 1915; Ph.D., 1919.

1. The flood of 1913 in the lower White river region of Indiana. (With Hal P. Bybee.) Ind. Univ. Studies, No. 22, pp. 105-223. Oct., 1914.
2. The flatwoods region of Owen and Monroe counties, Indiana. Proc. Ind. Acad. Sci. for 1914, pp. 399-428. 1915.
3. Glacial geology (geology of the Bloomington quadrangle). 39th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 217-222. 1915.
4. Valley trenching and gradation plains in southern Indiana and associated regions. Sci., N.S., XLIII, No. 1107, p. 398. March 17, 1916.
5. The "American Bottoms" region of eastern Greene county, Indiana: a type unit in southern Indiana physiography. Ind. Univ. Studies, VI, No. 40, pp. 61. March, 1919.
6. The stratigraphy of the Chester series of southern Indiana. Sci., N.S., LI, No. 1325, pp. 521-522. May 21, 1920.
7. Static rejuvenation. Sci., N.S., LII, No. 1388, pp. 182-183. Aug. 20, 1920.

GROVER CLEVELAND MANCE.

A.B., Colgate University, 1906; A.M., Indiana University, 1914; Ph.D., 1915.

1. Utilization of waste stone. 39th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 230-236. 1914.
2. Utilization of by-products of Oolitic limestone. 39th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 237-312. 1914.
3. Power economy and the utilization of waste in the quarry industry of southern Indiana. Ind. Univ. Studies, IV, No. 35, pp. 204, 17 figures, 8 charts. March, 1917.

Mrs. EULA DAVIS McEWAN.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1918.

1. A study of the Brachiopod genus *Platystrophia*. Proc. U.S. Nat. Mus., LVI, pp. 383-448, 10 plates. 1919.
2. The Ordovician at Madison, Indiana. Am. Jour. Sci., 4th Ser., L, pp. 154-158. 1920.

CHARLES WILLIAM SHANNON.

A.B., Indiana University, 1906; A.M., 1907.

1. The roads and road materials of Monroe county, Indiana. 30th Ann. Rep. Ind. Dept. Geol. and Nat. Res., pp. 941-967, 10 plates, 1 map. 1906.
2. Drainage area of the east fork of White river. Proc. Ind. Acad. Sci. for 1906, pp. 53-70, 10 plates, 1 map. 1907.
3. The iron ore deposits of Indiana. 31st Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 299-428, 19 plates, 17 text figures, 5 maps. 1907.
4. The Indiana soil survey. Indiana soil types. 32d Rep. Dept. Geol. and Nat. Res. Ind., pp. 77-118, 12 figures. 1908.
5. Soil survey of Monroe, Brown, Lawrence, Martin, Orange, Washington, and Jackson counties. (With L. C. Snider.) 32d Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 119-196, 19 figures, 7 maps. 1908.
6. Soil survey of Perry, Dubois, and Crawford counties. 33d Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 277-342, 15 figures, 4 maps. 1909.
7. Soil survey of Morgan and Owen counties. 36th Rep. Dept. Geol. and Nat. Res. Ind., pp. 135-280. 1912.
8. Results of glaciation in Indiana. Proc. Ind. Acad. Sci. for 1911, pp. 173-196, 14 figures. 1912.
9. The sand areas of Indiana. Proc. Ind. Acad. Sci. for 1911, pp. 197-210, 13 figures. 1912.

LUTHER CROCKER SNIDER.

A.B., Indiana University, 1908; A.M., 1909.

1. Soil survey of Monroe, Brown, Lawrence, Martin, Orange, Washington, and Jackson counties. (With C. W. Shannon.) 32d Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 119-196, 19 figures, 7 maps. 1909.
2. Soil survey of Daviess county. 33d Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 343-357, 4 figures, 1 map. 1908.

WILLIAM MOTIER TUCKER, Assistant Professor of Geology.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., 1916.

1. Water power of southern Indiana. 35th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 11-77, 2 figures, 5 maps. 1910.
2. Water power of Indiana. 36th Ann. Rep. Dept. Geol. and Nat. Res. Ind., pp. 469-538. 1912.
3. Pyrite deposits in Ohio coal. Econ. Geol., XIV, pp. 198-219. 1919.

STEPHEN SARGENT VISHER, Assistant Professor of Geology.

B.S., University of Chicago, 1909; M.S., 1910; A.M., University of South Dakota, 1912; Ph.D., University of Chicago, 1914.

1. A list of the birds of western South Dakota. The Auk, XXVI, pp. 144-153. April, 1909.
2. Notes on the zonal distribution of the birds of Pima county, Ariz. The Auk, XXVII, pp. 279-288. July, 1910.

3. The avifauna of Harding county, northwestern South Dakota. *The Auk*, XXVIII, pp. 5-16, Jan., 1911. Supplements in *The Auk* for Jan., 1912, pp. 110-111, and April, 1913, p. 281. 1911-1913.
4. Annotated list of birds of Sanborn county, southeast-central South Dakota. *The Auk*, XXX, pp. 561-573. Oct., 1913.
5. Birds of Fall river county, southwestern South Dakota. *Wilson Bull.*, XXIV, pp. 1-6, March, 1912, and XXV, pp. 38-39, March, 1913. 1912-1913.
6. The birds of the vicinity of the State University, Clay county, South Dakota. *Wilson Bull.*, XXVII, pp. 321-335. June, 1915.
7. Adaptations to the environment as illustrated by the sandhill crane and the sage hen. *Wilson Bull.*, XXII, pp. 115-117, June, 1910, and XXV, pp. 90-92, June, 1913. 1910-1913.
8. Birds of the southern Arizona desert. *Bird Lore*, XII, pp. 186-188. Sept., Oct., 1910.
9. A new bird for the U.S.: the red-eyed cowbird in Arizona. *The Auk*, XXVI, p. 307, July, 1909, and XXVII, p. 210, April, 1910. 1909-1910.
10. South Dakota records of 15 western birds. *The Auk*, XXVIII, p. 270, April, 1911, and XXX, pp. 280-281, April, 1913. 1911-1913.
11. Northern eider in South Dakota: a new record for the interior of North America. *The Auk*, XXIX, pp. 535-536. Oct., 1912.
12. Extensions of ranges of seven eastern birds. *Wilson Bull.*, XXV, p. 44. March, 1913.
13. On one bird imitating the song of another species. *The Condor*, XIV, p. 199. Sept., Oct., 1912.
14. Water-fowl migration in South Dakota. *Bird-Lore*, XIV, pp. 169-170. May-June, 1912.
15. Bird migration in the Dakota Valley. *Wilson Bull.*, XXVIII, pp. 128-129. Sept., 1916.
16. Additions to the flora of the Black Hills of South Dakota.
 - I. 16 species. *Torreya*, IX, pp. 186-188. Sept., 1909.
 - II. 25 species. *Mühlenbergia*, VIII, pp. 135-137. Jan., 1913.
 - III. 43 species. *Mühlenbergia*, IX, pp. 33-39. April, 1913.
17. Additions to the flora of South Dakota. *Mühlenbergia*, IX, pp. 45-52, and pp. 69-77 (90 and 120 species, respectively). May, Dec., 1913.
18. A key to the names of common rocks. *Publ. Dept. Geol., Univ. S.D.* Nov., 1911.
19. Geological rock series of South Dakota. *Publ. Dept. Geol., Univ. S.D.*, May, 1912. (Reprinted *Bull. No. 5, S.D. Geol. Surv.*) 1912.
20. Common flowers and birds of South Dakota. *Arbor and Bird Day Ann.*, State Dept. Public Instruction, pp. 23-26, 38-49, 1913. 1913.
21. Ecology of the South Dakota Sand Hills. *Am. Bot.*, XIX, pp. 91-94. Aug., 1913.
22. The geography, geology, and biology of south-central South Dakota. *Bull. 5, S.D. Geol. Surv.*, pp. 152, 44 plates, 4 maps. 1912.

23. The geography of South Dakota (for elementary schools). Chicago, Rand, McNally, pp. 38. 1912.
24. Prolonging the life of paper maps. Sch. Sci. and Math., XIII, pp. 542-543. (Reprinted in Jour. Geog., XI.) June, 1913.
25. Storm erosion in the Badlands. Jour. Geog., XI, pp. 294-296. May, 1913.
26. The climatic history of the Bajadas of the Tucson bolson of Arizona. Sci., N.S., XXXVII, p. 459. Mar. 21, 1913.
27. The biology and biogeography of Harding county, northwestern South Dakota. Bull. 6, S.D. Geol. Surv., pp. 103, 6 plates. 1914.
28. The significance of the biota and of biogeography. Bull. Am. Geog. Soc., XLVII, pp. 509-520. July, 1915.
29. The geography of the Red River Valley of Minnesota and North Dakota. Jour. Geog., XIV, pp. 202-206. Feb., 1916.
30. Humifying our houses and classrooms, the need of and the way. The State Normal Schools' Quart. Jour., I, p. 61. April, 1916.
31. The biogeography of the northern Great Plains. The Geog. Rev., II, pp. 89-115. Aug., 1916.
32. The function of geography in the elementary schools. State Normal Schools' Quart. Jour., I, p. 85. Sept., 1916.
33. Some results of the geographic location of Australia. Jour. Geog., XVI, pp. 305-309. April, 1918.
34. The natural resources of Australia. Jour. Geog., XVI, pp. 327-332. May, 1918.
35. Geographic influences affecting the choice of the boundaries of South Dakota. S.D. Dept. Hist. Collections, IX, pp. 380-385. 1918.
36. Results of the earth's rotation and of its spherical shape. Jour. Geog., XVIII, pp. 98-101. Nov., 1918.
37. Regional geography of South Dakota. Vermilion, Bull. 8, S.D. Geol. Surv., pp. 178, 19 maps, 33 half-tones, 23 tables. 1918.
38. The Australian environment: a review summary. Mo. Weath. Rev., XLVII, pp. 490-494. July, 1919.
39. A report on the minable coal under the Wabash river. Indiana Official Year Book for 1919, pp. 7; reprinted in Ind. Dept. Cons. Ann. Rep., 1919, pp. 27-33. 1919.
40. The Sullivan county (Indiana) oil fields. Ind. Geol. Surv., Bull. on Petroleum in Indiana, pp. 228-241. 1920.
41. Review of report by William Newton Logan, on kaolin in Indiana. Jour. Geol., XXVIII, p. 470. July-Aug., 1920.
42. Thirty common evidences of air pressure. Sch. Sci. and Math., XX, pp. 608-611. Oct., 1920.
43. The geology of the Sullivan county (Indiana) oil fields. Sci., N.S., LI, p. 493. May 14, 1920.
44. Climate and geology. Sci., N.S., LI, pp. 522-523. May 21, 1920.

DEPARTMENT OF GERMAN

CARL WILHELM FERDINAND OSTHAUS, Professor of German.

Graduate of the Gymnasium of Hildesheim, 1880; A.M., Indiana University, 1890.

1. Review of Hager's 'Freytag's Aus dem Staat Friedrichs des Grossen'.
Mod. Lang. Notes, V, pp. 301-303. May, 1890.
2. Gerstäcker's 'Germelshausen'. With introduction and English notes.
Boston, pp. vii, 56. 1891.
3. Eichendorff's 'Aus dem Leben eines Taugenichts'. With introduction,
English notes, and vocabulary. Boston, pp. ix, 176. 1892.
4. Review of Carruth's 'Schiller's Wilhelm Tell'. Jour. Ger. Philol., II,
pp. 125-126. 1898.
5. Ein litterarischer Vandalismus? (Erwiderung). Pädagogische Monats-
hefte, I, pp. 8-10. March, 1900.
6. Abridged editions of modern German authors. Reviews of nine diff-
erent novels. Jour. Ger. Philol., IV, pp. 248-259. 1902.
7. Where empire and republic meet. Western Camera Notes, IV, pp.
221-225, 5 plates. Sept., 1903.
8. Revision of Mary A. Fröst's edition of Scheffel's 'Trompeter von Säk-
kingen'. With introduction and notes. New York, pp. xxiii, 319. 1904.
9. German prose composition. With notes and vocabulary. (With
Ernest H. Biermann.) New York, Cincinnati, Chicago, pp. 191. 1909.
10. A key to German prose composition. (With E. H. Biermann.) New
York, Cincinnati, Chicago, pp. 55. 1910.
11. Sudermann's 'Frau Sorge'. With introduction, English notes, and
vocabulary. (With Eugene Leser.) Boston, pp. vi, 353. 1911.
12. Review of 'Thayer's Fontane's Grete Minde'. Mod. Lang. Notes,
XXVII, pp. 87-89. March, 1912.
13. Note on Lowell's Arnold's 'Einst im Mai'. Mod. Lang. Notes, XXVIII,
pp. 228-229. Nov., 1913.
14. Ernst's 'Asmus Sempers Jugendland'. With introduction, English notes,
and vocabulary. Boston, pp. xi, 305. 1915.
15. Parliamentary exercises in German student clubs. Monatshefte fuer
deutsche Sprache und Pädagogik, XVI, pp. 148-150. May, 1915.

BERT JOHN VOS, Professor of German.

A.B., University of Michigan, 1888; Ph.D., Johns Hopkins University, 1892.

1. Review of M. D. Learned's 'The saga of Walther of Aquitaine'. Mod.
Lang. Notes, VIII, pp. 377-380. 1893.
2. Review of Henrici's edition of Hartmann von Aue's 'Iwein'. Mod.
Lang. Notes, IX, pp. 185-189. 1894.

3. Review of Witmanns' 'Deutsche Grammatik (Gotisch, Alt-Mittel- und Neuhochdeutsch)'. *Mod. Lang. Notes*, X, pp. 34-39. 1895.
4. The diction and rime-technic of Hartman von Aue. New York. Leipzig, pp. 74. 1896.
5. Materials for German conversation. New York, pp. v, 176. 1900.
6. Rime-parallelism in Old High German verse. Baltimore, 'Studies in honor of Basil Lanneau Gildersleeve', pp. 435-442. 1902.
7. 'The religion of the Teutons', by P. D. Chantepie de la Saussaye, translated from the Dutch. Boston, pp. vii, 504. 1902.
8. Review of W. Kurrelmeyer's 'The historical development of the types of the first person plural imperative in German'. *Zeitschrift für deutsche Wortforschung*, II, pp. 323-326. 1902.
9. Edition of 'Kinder und Hausmärchen der Brüder Grimm'. New York, pp. 191. 1903.
10. Essentials of German. New York, pp. viii, 222. 1903. Second edition, New York, pp. 279. 1906. Third edition, New York, pp. 287. 1908. Fourth edition, New York, pp. 349. 1914. 'Supplementary Exercises' to same, New York, pp. 47. 1905. 'Alternative Exercises', New York, pp. 85. 1903-1917.
11. 'Die Harzreise' von Heinrich Heine. Edited with introduction, notes, and vocabulary. Boston, pp. 196. 1908.
12. Notes on Heine, I-III. *Mod. Lang. Notes*, XXIII, 25-28; IV-VI, *Mod. Lang. Notes*, XXIII, pp. 39-43. 1908.
13. Review of Howard and Sturtevant's edition of Gottfried Keller's 'Das Fähnlein der sieben Aufrechten'. *Mod. Lang. Notes*, XXIII, pp. 251-252.
14. Schiller's 'Wilhelm Tell'. Edited with introduction and notes. Boston, pp. lvii, 387. 1911.
15. Review of E. von der Hellen's 'Register zu Goethe's Sämtlichen Werken'. *Mod. Lang. Notes*, XXVIII, p. 232. 1913.
16. Review of Røedder's 'Schwarzwaldleut'. *Mod. Lang. Notes*, XXVIII, p. 264. 1913.
17. Review of Kurrelmeyer's 'Die Doppeldrucke in ihrer Bedeutung für die Textgeschichte von Wielands Werken'. *Mod. Lang. Notes*, XXIX, p. 32. 1914.
18. Review of Riemer's 'Wörterbuch und Reimverzeichnis zu dem Armen Heinrich Hartmanns von Aue'. *Mod. Lang. Notes*, XXIX, pp. 25-27. 1914.
19. Review of Gierach's edition of 'Der Arme Heinrich of Hartmann von Aue'. *Mod. Lang. Notes*, XXIX, pp. 63-64. 1914.
20. Review of F. G. G. Schmidt's 'Melchior Meyr's Ludwig und Annemarie'. *Mod. Lang. Notes*, XXIX, p. 96. 1914.
21. Review of M. M. Skinner's 'Spielhagen's Das Skelett im Hause'. *Mod. Lang. Notes*, XXIX, p. 128. 1914.
22. Review of Schiller's 'Anthologie Gedichte herausgegeben von Wolfgang Stammler'. *Mod. Lang. Notes*, XXIX, pp. 144-145. 1914.

23. Review of Evans and Meerhaut's 'Ein Charakterbild von Deutschland'. Mod. Lang. Notes, XXIX, p. 199. 1914.
24. Notice of Theodor Storm's 'Nachträge zu seinen Werken'. Mod. Lang. Notes, XXIX, pp. 230-231. 1914.
25. Review of Hans Schulz' 'Deutsches Fremdwörterbuch'. Mod. Lang. Notes, XXIX, p. 264. 1914.
26. Grundzüge der deutschen Grammatik. New York, pp. 46. 1914.
27. Review of Prokosch's 'Deutsches Lese- und Uebungsbuch'. Mod. Lang. Notes, XXX, p. 32. 1915.
28. Notice of Tegner's 'The Children of the Lord's Supper', translated by Longfellow (American-Scandinavian Foundation). Mod. Lang. Notes, XXX, p. 64. 1915.
29. Review of 'Beatrijs, A Middle Dutch Legend', edited by A. J. Barnouw. Mod. Lang. Notes, XXX, pp. 95-96. 1915.
30. Notice of Jahrbuch der Goethe-Gesellschaft. Mod. Lang. Notes, XXX, p. 127. 1915.
31. Review of 'Heine's Die Harzreise', edited by L. R. Gregor. Mod. Lang. Notes, XXX, p. 200. 1915.
32. Review of 'Schiller's Wilhelm Tell', edited by Palmer. Mod. Lang. Notes, XXX, p. 264. 1915.
33. Review of 'Heinrich Seidel's Leberecht Hühnchen', edited by W. F. Luebke. Mod. Lang. Jour., I, pp. 72-73. 1916.
34. Review of 'Gerstäcker's Der Wilddieb', edited by W. R. Myers. Mod. Lang. Jour., I, pp. 226-227. 1917.
35. Review of 'Goethe's Hermann und Dorothea,' edited by Ernst Feise. Mod. Lang. Jour., II, pp. 181-183. 1918.
36. Review of 'Bibliography of the Best Books for the Study of German'. (Univ. of Calif., Dept. of German). Mod. Lang. Jour., II, pp. 332-333. 1918.
37. Review of T. E. Oliver's 'Suggestions and References for Modern Language Teachers'. Mod. Lang. Jour., II, pp. 332-333. 1918.
38. Review of 'Goethe's Hermann und Dorothea', edited by Julianne A. Roller. Mod. Lang. Jour., III, 189-191. 1919.
39. Review of 'Lieder and Pettengill's Manual of Military German'. Mod. Lang. Jour., IV, pp. 381-383. 1920.

DEPARTMENT OF GREEK

HORACE ADDISON HOFFMAN, Dean Emeritus of the College of Liberal Arts,
and Professor Emeritus of Greek.

A.B., Indiana University, 1881; A.M., Harvard University, 1884; LL.D., Indiana University, 1920.

1. The religious and ethical views of Æschylus. Ind. Univ. Bull.
March, 1888.
2. The study of man through language and literature. Proc. Ind. Col.
Asso. for 1889. 1889.
3. A catalogue of the fishes of Greece, with notes on the names now in use
and those employed by classical authors. (With David Starr Jordan.) Proc. Acad. Nat. Sci. Phila.
Aug. 17, 1892.
4. Everyday Greek. The University of Chicago Press, pp. 107. 1919.
5. The ultimate test. Ind. Univ. Alum. Quart., VII, No. 4, pp. 518-537.
Oct., 1920.

FRANK WILLIAM TILDEN, Associate Professor of Greek.

A.B., Hamilton College, 1892; A.M., Harvard University, 1897.

1. Greek literature in English. Ind. Univ. Book Store, pp. 83.
First edition, 1916; new and revised edition, 1920. 1916, 1920.
2. Greek life. Ind. Univ. Book Store, pp. 61. First edition, 1916; new
and revised edition, 1920. 1916, 1920.

DEPARTMENT OF HISTORY

F. LEE BENNS, Assistant Professor of History.

A.B., Syracuse University, 1914; A.M., 1916; Ph.D., Clark University, 1920.

1. A student peace conference. *The Outlook*, CXXI, pp. 260-262.
Feb. 12, 1919.

LOGAN ESAREY, Associate Professor of Western History.

A.B., Indiana University, 1905; A.M., 1909; Ph.D., 1913.

1. Vincennes' first city government. *Ind. Mag. Hist.*, V, pp. 26. 1909.
2. Internal improvements in early Indiana. *Ind. Hist. Soc. Publ.*, V, pp. 47-158. 1912.
3. State banking in Indiana, 1814-72. *Ind. Univ. Studies*, No. 15, pp. 215-305. April, 1912.
4. Indiana captives in early Indiana. *Ind. Mag. Hist.*, IX, pp. 95-112. 1913.
5. Editor of *Indiana Magazine of History*, Vols. IX-XVI, inclusive. 1913-1921.
6. Organization of the Jacksonian party in Indiana. *Miss. Val. Hist. Soc. Proc.*, VII, pp. 220-243. 1914.
7. *Pioneers of Morgan county* (edited). *Ind. Hist. Soc. Publ.*, V, pp. 231-516. 1915.
8. *Courts and lawyers of Indiana*. (With Leander J. Monks and Ernest V. Shockey.) 3 vols. Indianapolis, Federal Publishing Co., pp. 1437. 1915.
9. *History of Indiana from its exploration to 1850*. Indianapolis, pp. ix, 572. 1915.
10. Organizing a state. *Proc. Ohio Valley Hist. Asso.*, VI, pp. 98-122. 1916.
11. Indiana local history: a guide to its study. *Ind. Univ. Ext. Div. Bull.*, I, No. 7, pp. 19. March, 1916.
12. The pioneer aristocracy. *Ind. Mag. Hist.*, XIII, pp. 270-287. 1917.
13. Pioneer politics in Indiana. *Ind. Mag. Hist.*, XIII, pp. 99-128. 1917.
14. *History of Indiana from 1850 to the present*. Indianapolis, pp. xi, 572-1148. 1918.
15. Literary spirit among the early settlers of the Ohio Valley. *Miss. Val. Hist. Rev.*, V, pp. 143-157. 1919.

ALBERT LUDWIG KOHLMEIER, Professor of History.

A.B., Indiana University, 1908; A.M., Harvard University, 1911; Ph.D., 1920.

1. Review of Wertenbaker's 'Virginia under the Stuarts'. *Ind. Mag. Hist.*, X, pp. 95-97. June, 1914.
2. Review of Corwin's 'French policy and the American alliance'. *Ind. Mag. Hist.*, XII, pp. 358-360. Dec., 1916.
3. What's wrong with Germany? *Ind. Univ. Alum. Quart.*, IV, No. 4, pp. 489-508. Oct., 1917.

4. The undertow of the Puritan influence in America. Miss. Val. Hist. Proc. 1919-1920.

WILLIAM ORLANDO LYNCH, Professor of History.

A.B., Indiana University, 1903; A.M., University of Wisconsin, 1908.

1. The flow of colonists to and from Indiana before the civil war. Ind. Mag. Hist., XI, pp. 1-7. March, 1915.
2. Indiana in the middle period. Proc. 62d Session, Ind. State Teachers' Asso. Oct., 1915.
3. Popular sovereignty and the colonization of Kansas from 1854 to 1860. Proc. Miss. Val. Hist. Asso. 1917-1918.
4. The character and leadership of Stephen A. Douglas. Proc. Miss. Val. Hist. Asso. 1919-1920.

WILLIAM THOMAS MORGAN, Associate Professor of History.

A.B., Ohio University (Athens), 1909; A.M., Harvard University, 1910; Ph.D., Yale University, 1916.

1. Review of Trégniz' 'L'Irlande dans la crise universelle'. Pol. Sci. Quart. March, 1919.
2. Review of F. Hackett's 'Ireland, a study in nationalism'. Pol. Sci. Quart. March, 1919.
3. Political parties and leaders in the reign of Queen Anne (1702-1710). Yale Hist. Studies, VII, pp. 427. 1920.
4. A syllabus in modern European history from Charlemagne to the present. Ind. Univ., pp. 154. 1920.
5. Review of W. C. Braithwaite's 'The second period of Quakerism'. Pol. Sci. Quart. Dec., 1920.

JAMES ALBERT WOODBURN, Professor of American History.

A.B., Indiana University, 1876; A.M., 1885; Ph.D., Johns Hopkins University, 1890; LL.D., Colgate University, 1909.

1. The race problem in the South. Ind. Student. Nov., 1885.
2. Government by the people. Ind. Student. Nov., 1886.
3. The Johns Hopkins University. Ind. Student. Jan., 1887.
4. Needed changes in the school law of Indiana. Ind. Sch. Jour. Feb., 1888.
5. The slave trade. Series. United Presbyterian. Jan., Feb., 1888.
6. Review of Sir Henry Maine's 'Lectures on international law delivered before the University of Cambridge'. Christian Union. June 27, 1889.
7. The study of history. Christian Union. Jan. 9, 1890.
8. The speaker and the quorum: an essay on the notable decision of Hon. Thomas B. Reed, speaker of the House of Representatives, Feb., 1890. Ind. Student. March, 1890.
9. Chautauqua: the growth of its summer school. Christian Union. Aug. 21, 1890.
10. History of higher education in Indiana. Bureau of Educ., Cir. of Information, No. 1, pp. 200. Washington. 1891.
11. States made from colonies. Chautauquan. Dec., 1891.

12. States made from territories. Chautauquan. Feb., 1892.
13. Causes of the American Revolution. Johns Hopkins Univ. Studies, X,
pp. 557-616. Dec., 1892.
14. Select orations of Burke and Webster. With introduction and notes.
(With C. W. Hodgin.) Boston, pp. 583. 1892.
15. The historical significance of the Missouri Compromise. Ann. Rep.
Am. Hist. Asso. for 1893, pp. 251-297. 1893.
16. The study of politics in American colleges. Am. Jour. of Pol.
May, 1894.
17. American political orations: re-edited with historical notes. 4 vols.
New York. 1896.
18. The tariff in legislation. Chautauquan. April, 1896.
19. The Monroe doctrine and some of its applications. Chautauquan.
Feb., 1896.
20. To what extent may undergraduate students of history be trained in the
use of the sources? Ann. Rep. Am. Hist. Asso. for 1897, pp. 45-49.
1897.
21. France in the American Revolution. Chautauquan. June, 1897.
22. The American Revolution, 1763-1783 (chapters and passages relating to
America from Lecky's history of England in the 18th century). Edited
with bibliographical and historical notes. New York, pp. xviii, 518.
1898.
23. The making of the constitution: a syllabus for Madison's Journal.
Chicago, pp. 41. 1898.
24. Washington's foreign policy and the Philippines. Independent, L.
Oct. 27, 1898.
25. Our plighted word and the Philippines. Independent, L, pp. 1381-1383.
Nov. 17, 1898.
26. The American republic and its government. New York, pp. iv, 410.
New edition revised, 1914. 1902, 1914.
27. Political parties and party problems in the United States. New York,
new edition, revised, 1913, pp. ix, 314. 1902, 1913.
28. Party politics in Indiana during the Civil War. Ann. Rep. Am. Hist.
Asso. for 1902, I, pp. 225-251. 1902.
29. Review of U. B. Phillip's 'Georgia and state rights'. Am. Hist. Rev.,
VIII, pp. 785-786. July, 1903.
30. Review of Lecky's 'Leaders of public opinion in Ireland'. Am. Hist.
Rev., IX, pp. 375-377. Jan., 1904.
31. Review of William Henry Smith's 'A political history of slavery'. Am.
Hist. Rev., IX, pp. 385-389. Jan., 1904.
32. American political history, 1763-1876: contributions of Professor Alex-
ander Johnston to Lalor's 'Cyclopedia of American history and po-
litical science'. Edited with bibliographical and historical notes.
2 vols., New York, Putnams, pp. 446-598. 1905.
33. Amending the constitution. Independent, LXVII, No. 3182.
Dec. 30, 1909.

34. The Scotch-Irish Presbyterians in Monroe county, Indiana. *Ind. Hist. Soc. Publ.*, IV, No. 8, pp. 437-522. 1910.
35. Elementary American history and government. (With Thomas F. Moran.) New York, Longmans, pp. 473. 1910, 1919.
36. Politics and parties. Annual contribution to the 'American Year Book', since 1911. New York, Appletons. 1911.
37. The Indiana Centennial, 1916; suggestions for a historical memorial building. *Ind. Mag. Hist.* April, 1912.
38. The life of Thaddeus Stevens. Indianapolis, Bobbs-Merrill, pp. 610. 1913.
39. The Republican party. Article in the *Cyclopedia of government*. New York, Appletons. Other articles on minor parties in the same *Cyclopedia*. 1913.
40. Sketches from the University's history, 1835-1858. *Ind. Univ. Alum. Quart.*, II, No. 3, pp. 249-269; II, No. 4, pp. 409-427; III, No. 1, pp. 20-37; III, No. 2, pp. 127-148; III, No. 3, pp. 347-359; III, No. 4, pp. 489-500; IV, No. 1, pp. 1-11; IV, No. 2, pp. 117-128. 1915-1917.
41. 'The new purchase', by Baynard R. Hall (Centennial edition). Edited, with introduction and notes. Princeton University Press, pp. xii, 522. 1916.
42. Introduction to American history. (With Thomas F. Moran.) New York, Longmans, pp. 294. 1916.
43. Review of Fred E. Haynes' 'Third party movements since the Civil War'. *Miss. Val. Hist. Rev.* Dec., 1916.
44. The citizen and the republic. (With Thomas F. Moran.) New York, Longmans, pp. 398. 1918.
- 44a. The foundations of the commonwealth. Address published in 'The Indiana centennial, 1916: a record of the celebration of the one hundredth anniversary of Indiana's admission to statehood'. Indiana Historical Commission. 1919.
45. Review of Arthur Charles Cole's 'The era of the Civil War: the centennial history of Illinois', III. *Am. Hist. Rev.*, XXV, pp. 123-124.-Oct., 1919.
46. The league of nations. A series of fourteen articles. Indianapolis Star. April, May, 1919.
47. Review of John Ely Briggs' 'Life of William Peters Hepburn'. *Am. Hist. Rev.*, XXV, pp. 735-736. July, 1920.
48. Review of Champ Clark's 'My quarter century of American politics'. *Am. Pol. Sci. Rev.* July, 1920.

DEPARTMENT OF HOME ECONOMICS

GEORGIA ELIZABETH FINLEY, Instructor in Home Economics.
B.S., Lewis Institute, 1914.

1. Outline for a study of the house. (With Mabel T. Wellman and Edith C. Williams.) Bull. No. 20, Ind. Dept. Pub. Inst., pp. 82-112. 1915.
2. Laboratory exercises on food study. (With Mabel T. Wellman and Frances L. Swain.) Bloomington, pp. 31. 1917.

ELIZABETH SAGE, Assistant Professor of Home Economics.
B.S., Columbia University, 1917.

1. Occupations for little fingers. (With Anna M. Cooley.) Scribner, pp. 154. 1905.
2. Nursery decorations. Circle Mag. 1907.

MABEL THACHER WELLMAN, Associate Professor of Home Economics.
A.B., Wellesley College, 1895.

1. Wellesley legenda (editor-in-chief). Boston, pp. 250. 1895.
2. Physiological law of habit and its application to common school studies. Educ., XXVII, pp. 52-56. 1896.
3. Experiments in chemistry for use in the high school. (With Mrs. Alice P. Norton.) Brookline, Mass., pp. 30. 1900.
4. Cake mixing. Jour. Home Econ., I, p. 419. 1909.
5. How to use the 100-calories portion in dietary teaching in high school. Jour. Home Econ., II, pp. 615-618. 1910.
6. Outline for a study of the house. (With Georgia E. Finley and Edith C. Williams.) Bull. No. 20, Dept. Pub. Inst., Ind., pp. 82-102. 1915.
7. Laboratory exercises in food study. (With Frances L. Swain and Georgia E. Finley.) Bloomington, pp. 31. 1917.
8. Food study. Boston, Little, Brown, and Co., pp. 312. 1917.
9. Economy in food. Boston, pp. 36. 1918.
10. Winning the war in the kitchen. (With Kate Daum.) Ind. Univ. News-Letter, XI, No. 5, pp. 16. 1918.
11. Recent advances in the selection and preparation of food. Jour. Home Econ., XI, pp. 288-295; Jour. Home Econ., XII, pp. 15-26. 1917.
12. War Diet in the Home. Am. Red Cross, 706, pp. 16. 1918.
13. Emergency cooking for large groups of people. (With others.) Am. Red Cross, 708, pp. 16. 1918.
14. Feeding children at school. (With Mrs. Clarence E. Edmondson.) Ind. Univ. Bull. Ext. Div., pp. 26. 1919.
15. Education again. Wellesley Alumnae Quart., IV, No. 2, pp. 112-113. Jan., 1920.

EDITH CADWALLADER WILLIAMS, Instructor in Home Economics.
A.B., Smith College, 1897; A.M. Columbia University, 1921.

1. Outline for a study of the house. (With Mabel T. Wellman and Georgia E. Finley.) Bull. No. 20, Ind. Dept. Pub. Inst., pp. 82-112. 1915.

DEPARTMENT OF LATIN

LILLIAN GAY BERRY, Associate Professor of Latin.

A.B., Indiana University, 1899; A.M., 1905.

1. Review of E. H. Sturtevant's 'P. Terenti Afri Andria'. Ind. Univ. Alum. Quart., II, No. 1, pp. 65-68. Jan., 1915.
2. Educational measurements and the direct method of teaching Latin. Univ. of Ill. Bull. Jan., 1916.
3. Review of J. O. Engleman's 'Moral education in school and home'. Ind. Univ. Alum. Quart., VI, No. 1, pp. 97-99. Jan., 1919.
4. The Americanization of America. Ind. Univ. Alum. Quart., VI, No. 2, pp. 139-158. April, 1919.
5. Reprint of 'The Americanization of America'. Ind. Univ. Ext. Div. Bull., IV, No. 11. July, 1919.
6. For teachers of Latin. Circ. Ind. Univ. Ext. Div. 1920.
7. Pictures from Roman life. Ind. Univ. Ext. Div. Bull., VI, No. 4, pp. 20, illustrated. Dec., 1920.

SELATIE EDGAR STOUT, Assistant Dean of the College of Liberal Arts, and Professor of Latin.

B.S., Grand River College, 1891; A.B., William Jewell College, 1901; Ph.D., Princeton University, 1910.

1. The governors of Mœsia. Princeton, N.J., pp. xii, 97. 1910.
2. Latin in the Latin class: a special vocabulary. Bloomington, Ind., pp. 32. 1917.
3. Rotation in office in the Roman republic. Classical Jour., XIII, p. 429. March, 1918.

DEPARTMENT OF MATHEMATICS

SCHUYLER COLFAX DAVISSON, Professor of Mathematics.

A.B., Indiana University, 1890; A.M., 1892; Sc.D., University of Tuebingen, 1900.

1. Die Geodätische Linie der Mannigfaltigkeit $ds^2 = dx^2 + \sin^2 x \, dy^2 + dz^2$
Tuebingen, pp. 26. 1900.
2. Review of Halsted's 'Rational geometry'. Bull. Am. Math. Soc., 2d
ser., XI, No. 6, pp. 330-336. 1905.
3. College algebra. New York, Macmillan, pp. 243. 1910.
4. Should one year's work in mathematics be required of freshmen in
college? Proc. Ind. State Teachers' Assn., pp. 100-102. 1908.

ULYSSES SHERMAN HANNA, Associate Professor of Mathematics.

A.B., Indiana University, 1895; A.M., 1898; Ph.D., University of Pennsylvania, 1905.

1. The influence of education on American politics. Indianapolis Educ.
Weekly, II, No. 8, pp. 115-116. 1884.
2. Irrelevant factors in Bitangentials of plane algebraic curves. Proc.
Ind. Acad. Sci. for 1905. pp. 81-83. 1905.
3. The equations of Bitangential curves of the general plane quintic and
sextic curves. Rendiconti del Circolo Matematico di Palermo,
XXVIII, pp. 185-209. 1909.
4. The original plats of the city of Bloomington, Ind. History of Lawrence
and Monroe counties, pp. 370-373; City Public Rec., XX, pp. 501-504.
1914.
5. The Bloomington sewerage system. Proc. Ind. Eng. Soc., 1914, pp.
136-141; New York City, Mun. Jour. and Eng., XXXVII. 1914.
6. A concrete roadway at Indiana University. Proc. Ind. Eng. Soc., 1916,
pp. 39-40; New York City, Eng. Rec., Feb. 12, 1916, p. 230; Chicago,
Eng. and Contracting. April 12, 1916.
7. Indiana University improves roadway with concrete. Concrete High-
way Mag., III, No. 5, pp. 101-102. 1919.

CORA BARBARA HENNEL, Assistant Professor of Mathematics.

A.B., Indiana University, 1907; A.M., 1908; Ph.D., 1912.

1. Transformations and invariants connected with linear homogeneous
difference equations and other functional equations. Am. Jour.
Math., XXXV, No. 4, pp. 431-452. Jan., 1913.
2. Review of John Gale Hun and Charles Ranald's 'Elements of plane and
spherical trigonometry'. Bull. Am. Math. Soc., XX, pp. 99-100.
1913.
3. Review of D. A. Murray's 'Elements of plane trigonometry'. Bull.
Am. Math. Soc., XX, pp. 156-157. 1913.

4. Review of J. H. Tanner and Joseph Allen's 'A brief course in analytic geometry'. *Bull. Am. Math. Soc.*, XIX, pp. 279-280. 1913.

DAVID ANDREW ROTHROCK, Dean of the College of Liberal Arts and Professor of Mathematics.

A.B., Indiana University, 1892, A.M., 1893; Ph.D., University of Leipsic, 1898.

1. Invariants of the finite continuous groups of the plane. *Am. Math. Mo.*, V, pp. 249-264. Nov., 1898.
2. Point invariants of the Lie groups. *Proc. Ind. Acad. Sci.* for 1898, pp. 119-135. 1899.
3. Differential invariants derived from point invariants. *Proc. Ind. Acad. Sci.* for 1898, pp. 135-147. 1899.
4. Essentials of algebra. (With Robert J. Aley.) New York, pp. v, 295. 1904.
5. Supplemental problems to essentials of algebra. (With Robert J. Aley.) New York. 1905.
6. Theory of functions. Lithographed by H. Köhler, Munich, pp. 80. 1904.
7. Concerning differential invariants. *Proc. Ind. Acad. Sci.* for 1906, pp. 85-92. 1907.
8. Conjugate functions and conical transformations. *Proc. Ind. Acad. Sci.* for 1906, pp. 93-94. 1907.
9. Elements of plane and spherical trigonometry. New York, Macmillan, pp. xi, 147. 1910.
10. Logarithmic, trigonometric, and other tables. New York, Macmillan, pp. xiv, 99. 1910.
11. Answers to problems in the author's 'Elements of plane and spherical trigonometry'. New York, Macmillan, pp. 10. 1912.
12. Some relations of plane and spherical geometry. *Proc. Ind. Acad. Sci.* for 1915, pp. 273-281. 1916.
13. Editorial notes. *Am. Math. Mo.*, pp. 120. 1916-1918.

KENNETH POWERS WILLIAMS, Associate Professor of Mathematics.

A.B., Indiana University, 1908; A.M., 1909; Ph.D., Princeton University, 1913.

1. The derivation of Poisson's equation by means of Gauss's theorem of the arithmetic mean. *Ind. Univ. Studies*, No. 8, pp. 64-68. 1910.
2. The solutions of non-homogeneous linear difference equations and their asymptotic form. *Trans. Am. Math. Soc.*, XIV, pp. 209-240. 1913.
3. The asymptotic form of the function $\psi(x)$. *Bull. Am. Math. Soc.*, XIX, pp. 472-479. 1913.
4. The linear difference equation of the first order. *Ann. Math.*, XV, pp. 129-135. 1914.
5. Concerning a certain totally discontinuous function. *Bull. Am. Math. Soc.*, XXI, pp. 117-120. 1914.
6. Review of Harold Jacoby's 'Astronomy, a popular handbook'. *Bull. Am. Math. Soc.*, XXI, pp. 145-148. 1914-1915.
7. A theorem concerning real functions. *Ann. Math.*, XVII, pp. 72-73. 1915.

8. Concerning Hills' derivation of the Lagrange equations of motion.
Bull. Am. Math. Soc., XXII, pp. 455-457. 1916.
9. Plane geometry. (With John H. Williams.) Chicago, Lyons and
Carnahan, pp. 264. 1915.
10. Solid geometry. (With John H. Williams.) Chicago, Lyons and
Carnahan. 1916.
11. Concerning some determinants connected with the Bernoulli numbers.
Am. Math. Mo., XXIII, pp. 263-264. 1916.
12. Note on continuous functions. Am. Math. Mo., XXV, pp. 246-248.
1918.
13. Diagrams for obtaining data. Field Artillery Jour., VIII, pp. 593-598.
1918.
14. A method for open warfare. Field Artillery Jour., IX, pp. 349-358.
1919.

HAROLD EICHHOLTZ WOLFE, Assistant Professor of Mathematics.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1919.

1. A study of some plane circle to circle transformations by means of
tetraeyclic coördinates. New Era Press. 1920.

DEPARTMENT OF PHILOSOPHY

WILLIAM FREDERICK BOOK, Professor of Educational Psychology.
A.B., Indiana University, 1900; Ph.D., Clark University, 1906.

1. Why pupils drop out of the high school. Ped. Sem., XI, pp. 204-233.
June, 1904.
2. The high school teacher from the pupil's point of view. Ped. Sem., XII,
pp. 239-298. Sept., 1905.
3. The psychology of skill with special reference to its acquisition in type-
writing. University of Montana Press, pp. 201. Nov., 1908.
4. The rôle of the teacher in the most expeditious and economic learning.
Jour. Educ. Psy., I, pp. 183-199. April, 1910.
5. The genesis and development of conscious attitudes (Bewusstseinslagen).
Psy. Rev., XVII, pp. 381-398. Nov., 1910.
6. Analysis of some higher thought processes. Psy. Bull., IX, pp. 30-34.
Jan. 15, 1912.
7. What the university can do for the elementary and secondary schools of
Indiana. Proc. 1st Conf. on Educ. Measurements, Ind. Univ. Bull.,
XII, No. 10, pp. 111-114. April, 1913.
8. Report to state board of education on Grand Rapids meeting of National
Society for Promotion of Industrial Education. Educ.-Jour., XIV,
pp. 179-185. Nov., 1913.
9. Vocational education. Educ.-Jour., XIV, pp. 299-307. Feb., 1914.
10. Development of vocational education in Indiana. Jour. Educ. Adm.
and Sup., I, pp. 419-438. Sept., 1915.
11. Meaning and place of vocational education in a state scheme of public
education. Educ.-Jour., XVI, pp. 304-312. Feb., 1916.
12. Vocational education and the high school. Proc. Ill. State High School
Conf., 1916, Univ. of Ill. Bull., XIII, No. 21, pp. 226-236.
Jan. 24, 1916.
13. Experimental work in Indiana schools. Ind. Univ. Ext. Div. Bull., III,
No. 8, pp. 120-129. April, 1918.
14. Variations in mental ability and its distribution among the school popu-
lation of an Indiana county. Ind. Univ. Ext. Div. Bull., IV, No. 4,
pp. 100-140. Dec., 1918.
15. War work of vocational psychologists and its significance for vocational
education. Educ.-Jour., XIX, pp. 355-371. March, 1919.
- 15a. Preliminary report on state-wide mental survey of high school seniors.
Ind. Univ. Ext. Div. Bull., VI, No. 1, pp. 31-67. Sept., 1920.
- *16. Instructions on vocational education to superintendents and boards of
education. Bull. No. 1, pp. 6. July, 1913.
- *17. Tentative course of study in industrial subjects for the public schools of
Indiana. Bull. No. 2, Voc. Ser., No. 1, pp. 203. Aug., 1913.

*A series of special educational bulletins issued by the State Board of Education, Indianapolis, 1913-17.

- *18. Vocational education and the public schools. Special Bull., pp. 14.
Sept., 1913.
- *19. Present status of industrial and vocational education in Indiana: report to superintendents and school boards of Indiana. Bull. No. 4, Voc. Ser. No. 2, pp. 10.
Nov., 1913.
- *20. The training and certification of teachers for agricultural, industrial, and household arts subjects in the public schools of Indiana. Bull. No. 5, Voc. Ser., No. 3, pp. 36.
Feb., 1914.
- *21. Vocational education in Indiana—rules and regulations for establishing and administering state aided vocational schools. Bull. No. 6, Voc. Ser. No. 4, pp. 48.
March, 1914.
- *22. Suggestions for the study of vocational education. Indianapolis, Dept. Pub. Inst., Bull. No. 9, pp. 48.
July, 1914.
- *23. First annual report on vocational education. Special Bull. State Board Educ., pp. 61.
Dec., 1914.
- *24. State course of study in industrial arts for the public schools of Indiana. Voc. Bull., No. 12, pp. 43.
Aug., 1915.
- *25. State course of study in domestic science for the public schools of Indiana. Voc. Bull., No. 13, pp. 125.
Aug., 1915.
- *26. Second annual report on vocational education. Special Bull. State Board Educ., pp. 48.
Jan., 1916.
- *27. Third annual report on vocational education in Indiana. Bi-annual Rep. Supt. Pub. Inst., pp. 601-646.
Jan., 1917.
- *28. The beginnings of vocational education in Indiana—48 special reports to the state board of education on problems, methods, and programs for vocational education in Indiana, not included in the above publications.
May 20, 1913—March 1, 1917.
- †29. A study of the people of Indiana and their occupations. R. J. Leonard, director. Ind. Univ. Studies, II, No. 26, pp. 143.
Feb. 15, 1915.
- †30. Some facts concerning the people, industries, and schools of Hammond, and a suggested program for elementary industrial prevocational and vocational education. R. J. Leonard, director. Board of Educ., Hammond, Ind., pp. 165.
April, 1915.
- †31. Report of the Richmond, Indiana, survey for vocational education. R. J. Leonard, director. Bull. State Board of Educ., Voc. Ser. No. 15, Surv. Ser. No. 3, pp. 599.
Dec., 1916.
- †32. Report of the Evansville survey for vocational education. Charles H. Winslow, director. State Board Educ., Voc. Ser. Surv. No. 19, Ser., No. 4, pp. 496.
Nov., 1916.

*A series of special educational bulletins issued by the State Board of Education. Indianapolis, 1913-17.

†As organizer and state director of vocational education in Indiana, 1913-17, Mr. Book organized and directed these Vocational Surveys. (See Introduction to the report of the Richmond and Indianapolis surveys for vocational education.) Each survey was participated in by many individuals, who made occupational analyses under the direction of a special director, who presented the findings of the survey to the state director and a state survey committee. The conclusions of each survey and recommendations for organizing and conducting vocational instruction were in each case written or edited by Mr. Book, after the individual reports and suggestions were made by members of the committee, and fully discussed in conference of the state survey committee.

- †33. Report of the Jefferson county survey for vocational education. W. A. Millis, director. State Board Educ., Voc. Ser. Surv. No. 20, Ser., No. 5, pp. 86. Jan., 1917.
- †34. Report of the Indianapolis, Indiana, survey for vocational education. Charles H. Winslow, director. State Board of Educ., Voc. Ser., Surv. No. 21, Surv. Ser., No. 6, Vol. I, pp. 400, Vol. II, pp. 527. Jan., 1917.

WILLIAM LOWE BRYAN, President of the University.

A.B., Indiana University, 1884; A.M., 1886; Ph.D., Clark University, 1892; LL.D., Illinois College, 1904; LL.D., Hanover College, 1908; LL.D., University of Notre Dame, 1917; LL.D., University of Michigan, 1918.

1. Psychology at Indiana University. Am. Jour. Psy., III, pp. 283-284. April, 1890.
2. On the development of voluntary motor ability. Am. Jour. Psy., V, pp. 125-204. Nov., 1892.
3. Auditory and visual memory in school children. Proc. Internat. Educ. Asso. for 1893, pp. 779-781. 1893.
4. Child study. systematic and unsystematic. Proc. N.E.A. for 1895, pp. 412-418. 1895.
5. On the methods and results of child study. Article in Johnson's Encyclopædia.
6. Science and education. Proc. N.E.A. for 1895, pp. 161-165. 1895.
7. Scientific and non-scientific methods of child study. Proc. N.E.A. for 1896, pp. 856-860. 1896.
8. Studies on the physiology and psychology of the telegraphic language. (With Noble Harter.) Psy. Rev., IV, pp. 27-53. Jan., 1897.
9. Hygiene of motor development. Proc. N.E.A. for 1897, pp. 279-280. 1897.
10. Report of special committee on the organization of a committee on school hygiene. Proc. N.E.A. for 1897, pp. 327-328. 1897.
11. Plato the teacher; being selections from the Apology, Euthydemus, Protagoras, Symposium, Phædrus, Republic, and Phædo of Plato. Edited with introduction and notes. (With Mrs. Charlotte Lowe Bryan.) New York, pp. xli, 454. 1897.
12. The republic of Plato. With studies for teachers. (With Mrs. Charlotte Lowe Bryan.) New York, pp. 313. 1898.
13. Studies on the telegraphic language. The acquisition of a hierarchy of habits. (With Noble Harter.) Psy. Rev., VI, pp. 345-375. July, 1899.
14. Science in the daily press. (With Ernest H. Lindley.) Sci., N.S., XI, p. 74. 1900.
15. An arithmetical prodigy. (With E. H. Lindley.) Proc. Am. Psy. Asso. for 1900. Psy. Rev., VII, p. 135. 1900.

†As organizer and state director of vocational education in Indiana, 1913-17, Mr. Book organized and directed these Vocational Surveys. (See Introduction to the report of the Richmond and Indianapolis surveys for vocational education.) Each survey was participated in by many individuals, who made occupational analyses under the direction of a special director, who presented the findings of the survey to the state director and a state survey committee. The conclusions of each survey and recommendations for organizing and conducting vocational instruction were in each case written or edited by Mr. Book, after the individual reports and suggestions were made by members of the committee, and fully discussed in conference of the state survey committee.

16. The case of Arthur Griffith, arithmetical prodigy. (With E. H. Lindley.) *Compte rendu du Congrès International de Psychologie tenu à Paris, 1900*, p. 178. 1900.
17. Theory and practice. President's address, American Psychological Association, St. Louis meeting, Dec., 1903. *Psy. Rev.*, XI, pp. 71-82. March, 1904.
18. The spirit of Indiana. Bloomington, Ind., the University Book Store, pp. 172. 1917.

OTHNIEL R. CHAMBERS.

Senior, Indiana University, 1921. Assistant.

1. First revision of a group scale designed for investigating the emotions, with tentative norms. (With Sidney L. Pressey.) *Jour. App. Psy.*, III, pp. 97-104. Dec., 1919.

WILLIAM BAIRD ELKIN, Professor of Philosophy.

A.B., Manitoba University, 1889; Ph.D., Cornell University, 1894.

1. The relation of Hume's treatise to his inquiry. *Phil. Rev.*, III, pp. 672-688. Nov., 1894.
2. An inquiry into the causes of the decrease of the Hawaiian people. *Am. Jour. Soc.*, VIII, pp. 398-411. Nov., 1902.
3. Early education in Hawaii. *Ped. Sem.*, X, pp. 86-95. March, 1903.
4. Hero tales from Hawaiian history. *Hawaii's Young People*, VIII, pp. 1-3, 35-37, 59-61, 186-189, 250-251. Sept., Oct., Nov., March, May, 1903-04.
5. The relation of Hume's 'Treatise of human nature' to his inquiry concerning human understanding. New York, Macmillan, pp. ix, 330. 1904.
6. The problem of civilization in the twentieth century. *Am. Jour. Soc.*, XIII, pp. 541-560. Jan., 1908.
7. German philosophy of war. *Ind. Univ. Alum. Quart.*, V, No. 3, pp. 308-328. July, 1918.

JACOB ROBERT KANTOR, Associate Professor of Psychology.

Ph.B., University of Chicago, 1914; Ph.D., 1917.

1. Conscious behavior and the abnormal. *Jour. Abnor. Psy.*, XIII, pp. 158-168. Aug., 1918.
2. The ethics of internationalism and the individual. *Internat. Jour. Ethics*, XXIX, pp. 29-39. Oct., 1918.
3. Psychology as a science of critical evaluation. *Psy. Rev.*, XXVI, pp. 1-15. Jan., 1919.
4. Human personality and its pathology. *Jour. Phil., Psy., and Sci. Methods*, XVI, pp. 225-246. April, 1919.
5. Instrumental transformism and the unrealities of realism. *Jour. Phil., Psy., and Sci. Methods*, XVI, XVII, pp. 449-461. Aug., 1919.
6. Functional interpretation of human instincts. *Psy. Rev.*, XXVII, pp. 50-73. Jan., 1920.

7. Suggestions toward a scientific interpretation of perception. *Psy. Rev.*, XXVII, pp. 191-216. May, 1920.
8. Intelligence and mental tests. *Jour. Phil., Psy., and Sci. Methods*, XVII, pp. 260-268. May, 1920.
9. The rôle of psychological factors in digestion. *Sci.*, LII, p. 200. Aug., 1920

HARRY DEXTER KITSON, Professor of Psychology.

A.B., Hiram College, 1909; A.M., University of Minnesota, 1913; Ph.D. University of Chicago, 1915.

1. The importance of the teacher. *Collier's*, XLVI, pp. 18-30. Feb. 25, 1911.
2. The rôle of association in lip-reading. *Volta Rev.*, XVI, pp. 619-620. Sept., 1914.
3. Rational buying in the public schools. *Man. Tr. and Voc. Educ.*, XVI, pp. 214-218. Dec., 1914.
4. Suggestions toward a tentative theory of vocational guidance. *Man. Tr. and Voc. Educ.*, XVI, pp. 265-270; Jan., 1915. 'Readings in vocational guidance'. Edited by Bloomfield. Ginn, Boston, pp. 103-108. 1915.
5. Psychological tests for lip-reading ability. *Volta Rev.*, XVII, pp. 471-476. Dec., 1915.
6. How to use your mind: a psychology of study. Philadelphia, Lippincott, pp. 216. 1916.
7. Psychological tests and vocational guidance. *Sch. Rev.*, XXIV, pp. 207-214. March, 1916.
8. Review of E. B. Gowin's 'The executive and his control of men'. *Jour. Pol. Econ.*, XXIV, pp. 310-311. March, 1916.
9. Review of F. W. Taussig's 'Inventors and money makers'. *Jour. Pol. Econ.*, XXIV, pp. 411-412. April, 1916.
10. Mentality tests: a symposium. *Jour. Educ. Psy.*, VII, pp. 279-280. May, 1916.
11. Review of E. B. Titchener's 'A beginner's psychology'. *Sch. Rev.*, XXIV, pp. 486-488. June, 1916.
12. Interest as a criterion in vocational guidance. *Educ. Rev.*, LII, pp. 349-356. Nov., 1916.
13. The scientific study of the college student. Princeton, *Psy. Rev. Co.*, *Psy. Rev. Monograph Supplement*, XXIII, pp. 81. 1917.
14. Psychological measurements of college students. *Sch. and Soc.*, VI, pp. 307-311. Sept. 15, 1917.
15. The psychological moment. *Sci. Mo.*, IX, pp. 246-253. Sept., 1919.
16. Review of H. C. Link's 'Employment psychology'. *Jour. Pol. Econ.*, XXVII, pp. 806-809. Nov., 1919.
17. Comparison between two scales for the estimation of intelligence. *Jour. App. Psy.*, III, pp. 310-316. Dec., 1919.
18. Manual for the study of the psychology of advertising and selling. Philadelphia, Lippincott, pp. 115. 1920.

19. Vocational guidance and the theory of probability. Sch. Rev., XXVIII, pp. 143-150. Feb., 1920.
20. Economic implications in the psychological doctrine of interest. Jour. Pol. Econ., XXVIII, pp. 332-338. April, 1920.
21. How to make employees interested in their jobs. Am. Machinist, LII, pp. 983-985. May, 1920.
22. Morale in the army. U.S. Jour. of Infantry, XVI, pp. 939-944. May, 1920.
23. Note on the adjectival form of *Empathy*. Jour. Phil., Psy., and Sci. Methods, XVII, p. 644. Nov. 4, 1920.

LUELLA WINIFRED PRESSEY, Fellow in Psychology.

A.B., Vassar College, 1916; A.M., Indiana University, 1919; Ph.D., 1920.

1. A group point scale for measuring general intelligence. (With Sidney L. Pressey.) Jour. App. Psy., III, pp. 250-269. Sept., 1918.
2. Sex differences shown by 2,544 school children on a group scale of intelligence; with special reference to variability. Jour. App. Psy., II, pp. 323-340. Dec., 1918.
3. Irregularity on a psychological examination as a measure of deterioration. (With Sidney L. Pressey.) Jour. Abn. Psy., XIII, pp. 285-294. Dec., 1918.
4. Are the present psychological scales reliable for the examination of adults? (With Sidney L. Pressey.) Jour. Abn. Psy., XIII, pp. 314-324. Feb., 1919.
5. The 'practical efficiency' of a group scale of intelligence. (With Sidney L. Pressey.) Jour. App. Psy., pp. 68-80. March, 1919.
6. 'Cross-out' tests with suggestions as to a group scale. (With Sidney L. Pressey.) Jour. App. Psy., III, pp. 138-150. June, 1919.
7. Group tests of intelligence for the first and second grades. Ind. Univ. Ext. Div. Bull., V, No. 1, pp. 38-45. Sept., 1919.
8. A group scale of intelligence for use in the first three grades. Jour. Educ. Psy., X, pp. 297-308. Sept., 1919.
9. The influence of inadequate schooling and poor environment upon results with tests of intelligence. Jour. App. Psy., IV, pp. 91-96. March, 1920.
10. A group scale of intelligence for use in the first three grades: its validity and reliability. Jour. Educ. Res., I, pp. 285-294. April, 1920.
11. Scale of attainment No. I—an examination of achievement in the second grade. Jour. Educ. Res., I, pp. 572-581. Sept., 1920.
12. The relation of intelligence to achievement in the second grade. Ind. Univ. Ext. Div. Bull., VI, No. 1, pp. 68-77. Sept., 1920.

SIDNEY LEAVITT PRESSEY, Assistant Professor of Psychology.

A.B., Williams College, 1912; A.M., Harvard University, 1915; Ph.D., 1917.

1. Distinctive features in psychological test measurements made upon dementia praecox and chronic alcoholic patients. Jour. Abn. Psy., XII, pp. 130-139. June, 1917.

2. A group point scale for measuring general intelligence. (With Luella W. Pressey.) *Jour. App. Psy.*, III, pp. 250-269. Sept., 1918.
3. Irregularity on a psychological examination as a measure of deterioration. (With Luella W. Pressey.) *Jour. Abn. Psy.*, XIII, pp. 285-294. Dec., 1918.
4. A systematic plan for selecting subnormal and supernormal children in the public schools. *Ind. Univ. Ext. Div. Bull.*, IV, No. 4, pp. 92-99. Dec., 1918.
5. Are the present psychological scales reliable for the examination of adults? (With Luella W. Pressey.) *Jour. Abn. Psy.*, XIII, pp. 314-324. Feb., 1919.
6. A comparison of two cities and their school systems by means of a group scale of intelligence. *Ed. Adm. and Sup.*, V, pp. 53-62. Feb., 1919.
7. The practical efficiency of a group scale of intelligence. (With Luella W. Pressey.) *Jour. App. Psy.*, III, pp. 68-80. March, 1919.
8. Irregularity on a Binet examination as a measure of its reliability. *Psy. Clinic*, XII, Nos. 5-9, pp. 236-240. May, 1919.
9. School surveys by means of group scales of intelligence. *Ind. Univ. Ext. Div. Bull.*, V, No. 1, pp. 46-53. Sept., 1919.
10. 'Cross-out' tests, with suggestions as to a group scale of the emotions. (With Luella W. Pressey.) *Jour. App. Psy.*, III, pp. 138-150. June, 1919.
11. First revision of a group scale designed for investigating the emotions with tentative norms. (With O. R. Chambers.) *Jour. App. Psy.*, III, pp. 97-104. Dec., 1919.
12. A comparison of colored and white children by means of a group scale of intelligence. *Jour. App. Psy.*, III, pp. 277-282. Sept., 1919.
13. A comparison of colored and white school children by means of a group scale of intelligence. (With G. F. Teeter.) *Jour. App. Psy.*, III, pp. 279-285. Sept., 1919.
14. A study of country children in a good and a poor farming district by means of a group scale of intelligence. (With J. B. Thomas.) *Jour. App. Psy.*, III, pp. 283-286. Sept., 1919.
15. The relation of occupation to intelligence, as it appears in the school children of a community. (With Ruth Ralston.) *Jour. App. Psy.*, III, pp. 368-374. Dec., 1919.
16. A practical information test for use with delinquents and illiterate adults. *Jour. App. Psy.*, III, pp. 374-379. Dec., 1919.
17. The value of the group point scale in prognosticating success and failure in junior high school. *Jour. App. Psy.*, III, pp. 380-383. Dec., 1919.
18. Suggestions with regard to Professor Thurstone's method of critical scores. *Jour. Educ. Psy.*, X, pp. 517-519. Dec., 1919.
19. A brief group scale of intelligence for use in school surveys. *Jour. Educ. Psy.*, XI, pp. 89-100. Feb., 1920.

20. An attempt to measure the comparative importance of general intelligence and certain character traits in contributing to success in school. *Elem. Sch. Jour.*, XXI, pp. 220-229. Nov., 1920.
21. Note regarding differences among state institutions for the feeble-minded in the make-up of their population, as indicative of the adequacy of state care for mental defectives. *Jour. Criminal Law and Criminology*, XI, pp. 118-119. May, 1920.
22. Suggestions looking toward a fundamental revision of current statistical procedure, as applied to tests. *Psy. Rev.* Nov., 1920.
23. Suggestions with regard to the use of mental tests, and in particular with regard to their use in combination with tests of achievement. *Ind. Univ. Ext. Div. Bull.*, VI, No. 1, pp. 78-80. Sept., 1920.
24. Measuring the "usefulness" of tests, in solving school problems. (With Luella W. Pressey.) *Sch. and Soc.*, XII, pp. 531-534. Nov. 27, 1920.

RUTH RALSTON.

Senior, Indiana University, 1921.

1. The relation of occupation to intelligence as it appears in the school children of a community. (With Sidney L. Pressey.) *Jour. App. Psy.*, III, pp. 368-374. Dec., 1919.

G. F. TEETER.

A.B., Indiana University, 1918.

1. A comparison of colored and white school children by means of a group scale of intelligence. (With Sidney L. Pressey.) *Jour. App. Psy.*, III, pp. 279-285. Sept., 1919.

J. B. THOMAS.

A.B., Swarthmore College, 1914; A.M., Indiana University, 1919.

1. A study of country children in a good and a poor farming district by means of a group scale of intelligence. (With Sidney L. Pressey.) *Jour. App. Psy.*, III, pp. 283-286. Sept., 1919.

DEPARTMENT OF PHYSICS

MASON EDWARD HUFFORD, Assistant Professor of Physics.

A.B., Indiana University, 1911; A.M., 1912; Ph.D., 1916.

1. Some new diffraction photographs. *Phys. Rev.*, Ser. 2, III, pp. 240-244. 1914.
2. The diffraction ring system in the shadow of a circular object. *Phys. Rev.*, Ser. 2, VII, pp. 544-551. 1916.
3. The teaching of electrical potentials in cells or generators to elementary students. *Sch. Sci. and Math.*, XVII, pp. 818-821. 1917.

ARTHUR LEE FOLEY, Professor of Physics, and Waterman Research Professor, 1917-22.

A.B., Indiana University, 1890; A.M., 1891; Ph.D., Cornell University, 1897.

1. The surface tension of liquids. *Proc. Ind. Acad. Sci.* for 1895, pp. 67-75. 1896.
2. Surface tension of liquids. *Phys. Rev.*, III, No. 5, pp. 381-386. March-April, 1896.
3. Arc spectra. *Elec. Eng.*, XIV. Sept. 16, 1897.
4. Arc spectra. *Proc. Am. Asso. Adv. Sci.*, XLVI, pp. 93-94. 1897.
5. Arc spectra. *Phys. Rev.*, V, No. 8, pp. 129-151, 5 plates. Sept., 1897.
6. Variations in the spectrum of the open and closed electric arc. *Proc. Ind. Acad. Sci.* for 1897, pp. 95-97. 1898.
7. Electrolytic nature of the electric arc. *Proc. Ind. Acad. Sci.* for 1897, pp. 100-103. 1898.
8. The spectrum of cyanogen. *Proc. Ind. Acad. Sci.* for 1897, pp. 97-100. 1898.
9. X-ray transparency (abstract). *Proc. Ind. Acad. Sci.* for 1898, pp. 74-75. 1899.
10. Diamond fluorescence. *Proc. Ind. Acad. Sci.* for 1899, pp. 94-95. 1900.
11. Review of Cojori's 'History of physics'. *Phys. Rev.*, XIII, No. 5, pp. 315-316. May-June, 1899.
12. Diamond-glass fluorescence. *Sci.*, N.S., XIII, pp. 732-734. 1901.
13. A method of measuring the absolute dilation of mercury. *Proc. Ind. Acad. Sci.* for 1900, p. 99. 1901.
14. An improved Wehnelt interrupter. *Proc. Ind. Acad. Sci.* for 1900, pp. 97-98. 1901.
15. A modified Wehnelt interrupter. *Elec. World and Eng.*, XXXIX, pp. 373-374. March 1, 1902.
16. On the use of nickel in the core of a Marconi magnetic detector. *Proc. Ind. Acad. Sci.* for 1903, pp. 81-86. 1904.

17. On the use of manganese dioxide in the generation of oxygen from potassium-chlorate. (With Rolla R. Ramsey.) *Proc. Ind. Acad. Sci.* for 1903, pp. 89-91. 1904.
18. On the use of nickel in the core of a Marconi magnetic detector. *Phys. Rev.*, XVIII, pp. 349-354. May, 1904.
19. A remarkable distribution of the carbon deposit on the bulb of a "Hylo" incandescent lamp. *Sci.*, N.S., XIX, No. 475, pp. 204-205. Feb. 5, 1904.
20. The Edison effect in a "Hylo" lamp. *Proc. Ind. Acad. Sci.* for 1903, pp. 87-88. 1904.
21. A modified magnetic detector. *Elec. World and Eng.*, XLIII, No. 24, p. 1120. June 11, 1904.
22. The subject-matter of high school physics. *Teachers' Jour.*, IV, pp. 4-9. July, 1904.
23. The subject-matter of high school physics (abstract). *Proc. Nat. Educ. Asso.* for 1904, pp. 865-870; *Nat. Jour. Educ.*, LX, No. 4, p. 75. July 14, 1904.
24. Interference fringes about the path of an electric discharge. (With J. H. Haseman.) *Proc. Ind. Acad. Sci.* for 1904, p. 206. 1905.
25. Electromagnetic induction in conductors of different materials and in electrolytes. (With C. A. Evans.) *Proc. Ind. Acad. Sci.* for 1904, pp. 203-205. 1905.
26. Diffraction fringes from electric discharges and from fluid streams (abstract). *Phys. Rev.*, XX, pp. 399-400. June, 1905.
27. Physical science in 1905. *Indianapolis News*, 3 columns. Dec. 30, 1905.
28. Note on the molecular forces in gelatine. *Sci.*, XXIII, pp. 790-791. May 18, 1906.
29. A simple method of determining the absolute dilation of mercury. *Sch. Sci. and Math.*, VI, pp. 598-601. Oct., 1906.
30. Robert Judson Aley. *The Crimson*, I, No. 1, p. 9. 1909.
31. Recent developments in physical science. *Proc. Ind. Acad. Sci.* for 1909, pp. 89-100. 1910.
32. The tenacity of gelatine. *Proc. Ind. Acad. Sci.* for 1909, pp. 243-247. 1910.
33. Recent developments in physical science. *Pop. Sci. Mo.*, LXXVII, No. 5, pp. 447-456. Nov., 1910.
34. Objections to Laplace's theory of surface tension (abstract). *Proc. Ind. Acad. Science* for 1910, p. 181. 1911.
35. The surface tension temperature coefficient. *Proc. Ind. Acad. Sci.* for 1910, pp. 175-180. 1911.
36. A new method of photographing sound waves. (With Wilmer Souder.) *Phys. Rev.*, XXXV, No. 5, pp. 373-386. Nov., 1912.
37. A new method of photographing sound waves. *Brit. Jour. of Phot.*, LX, Nos. 2751 and 2752, pp. 62-65, 86-89. Jan. 24, 31, 1913.
38. Photographie des ondes sonores. *Revue generale des sciences pures et appliquees*, No. 20, pp. 750-752. 30 Octobre, 1913.

39. Photographing sound. *Sci. Am. Sup.*, Vol. LXXV, No. 1937, pp. 108-111. Feb. 15, 1913.
40. A simple method of harmonizing Leyden jar discharges. *Proc. Ind. Acad. Sci. for 1915*, pp. 305-306. 1916.
41. Conservation and civilization. *Proc. Ind. Acad. Sci. for 1914*, pp. 133-143. 1915.
42. The velocity of sound waves in tubes. *Proc. Ind. Acad. Sci. for 1918*, pp. 205-213. 1919.
43. The speed of sound pulses in pipes. *Phys. Rev.*, N.S., XIV, No. 2, pp. 143-151. Aug., 1919.
44. The relative velocity of sound waves of different intensity. *Proc. Ind. Acad. Sci. for 1915*, pp. 299-306. 1916.
45. Biography of Luther Dana Waterman. *Proc. Ind. Acad. Sci. for 1918*, pp. 214-220. 1919.
46. A new method of measuring the speed of sound pulses near the source. *Proc. Ind. Acad. Sci. for 1918*, pp. 221-224. 1919.
47. A photographic method of finding the instantaneous velocity of spark waves. *Phys. Rev.*, N.S., XVI, No. 5, pp. 449-463. Nov., 1920.
48. Photographic method of finding the instantaneous velocity of sound waves near their source (abstract). *Proc. Nat. Acad. Sci.*, VI, pp. 310-312. June, 1920.

ROLLA ROY RAMSEY, Professor of Physics.

A.B., Indiana University, 1895; A.M., 1898; Ph.D., Cornell University, 1901.

1. A photographic study of electrolytic cells. *Phys. Rev.*, IX, p. 189. 1899.
2. Eine photographische Untersuchung elektrolytischer Zellen. *Physikalische Zeitschrift*, I, p. 269. 1900.
3. The effect of gravity and pressure on electrolytic action. *Phys. Rev.*, XIII, pp. 1-30, 17 plates. 1901.
4. Die Wirkung von Schwere und Druck auf die elektrolytischen Vorgänge. *Phys. Zeitsch.*, III, pp. 177-182. 1902.
5. On the use of manganese dioxide in the generation of oxygen from potassium chlorate. *Proc. Ind. Acad. Sci. for 1902*, pp. 89-91. 1903.
6. The change of volume in Clark and cadmium cells and its relation to the change of electromotive force due to pressure. *Phys. Rev.*, XVI, p. 105. 1903.
7. An investigation of N-rays. (With W. P. Haseman.) *Proc. Ind. Acad. Sci. for 1904*, p. 255. 1905.
8. The radium clock. *Proc. Ind. Acad. Sci. for 1905*, p. 40. 1906.
9. A simple method of measuring electrolytic resistance. *Proc. Ind. Acad. Sci. for 1905*, p. 115. 1906.
10. Some peculiarities of electric sparks across short spark gaps. *Proc. Ind. Acad. Sci. for 1905*, p. 117. 1906.
11. Gas burners and standards of candle power. (With Hiromitsa Oi.) *Proc. Ind. Acad. Sci. for 1905*, p. 117. 1906.

12. Polarization of cadmium cells. Phys. Rev., XXI, p. 56. 1905.
13. Polarization of cadmium cells. Proc. Ind. Acad. Sci. for 1909, p. 229. 1910.
14. A convenient high potential battery. Proc. Ind. Acad. Sci. for 1910, p. 295. 1911.
15. The time given by university students to study and recitation. Sci., N.S., XXXIII, p. 823. 1911.
16. Polarization of cadmium cells. Proc. Ind. Acad. Sci. for 1911, p. 213. 1912.
17. The effect of pressure on a cadmium cell. Proc. Ind. Acad. Sci. for 1911, p. 215. 1912.
18. The oscillatory discharge of a Leyden jar. Phys. Rev., XXXV, p. 405. 1912.
19. Shrinkage of photographic paper. Proc. Ind. Acad. Sci. for 1913, p. 143. 1914.
20. Radioactivity of spring water. Proc. Ind. Acad. Sci. for 1914, p. 453. 1915.
21. Variation of the emanation content of certain springs. Proc. Ind. Acad. Sci. for 1914, p. 489. 1915.
22. Radium fertilizer. Sci., N.S., XLII, p. 219. 1915.
23. Radioactivity of spring water. Am. Jour. Sci., XL, p. 309. 1915.
24. Variation of the emanation content of certain springs. Phil. Mag., XXX, p. 815. 1915.
25. An electroscope for measuring the radioactivity of soils. Proc. Ind. Acad. Sci. for 1915, p. 307. 1916.
26. The cause of the variation of the emanation content of certain springs. Proc. Ind. Acad. Sci. for 1915, p. 310. 1916.
27. A standard condenser of small capacity. Proc. Ind. Acad. Sci. for 1915, p. 314. 1916.
28. An atomic model. Phil. Mag., XXXII, p. 207. 1917.
29. Atomic structures. Sch. Sci. and Math., XVIII, p. 792. 1918.
30. A kinetic model of the electron atom. Proc. Ind. Acad. Sci. for 1918, p. 312. 1919.

DEPARTMENT OF PHYSIOLOGY

DENNIS EMERSON JACKSON.

A.B., Indiana University, 1905; A.M., 1906; Ph.D., 1908.

1. The prolonged existence of adrenaline in the blood. *Am. Jour. Physiol.*, XXIII, pp. 226-245. 1909.

WILLIAM J. MOENKHAUS, Professor of Physiology.

A.B., Indiana University, 1894; A.M., 1895; Ph.D., University of Chicago, 1903.

1. Variation in the color-pattern of *Etheostoma caprodes*. (Abstract.) *Proc. Ind. Acad. Sci.* for 1893, pp. 231-232. 1893.
2. Some cases of mimicry in fishes. *Proc. Ind. Acad. Sci.* for 1894, p. 86. 1894.
3. Variation of North American fishes, I. The variation of *Etheostoma caprodes* Rafinesque. *Am. Nat.*, XXVIII, pp. 641-658; 4 plates. Aug., 1894.
4. Notes on a collection of fishes from Dubois county, Indiana. *Proc. Ind. Acad. Sci.* for 1895, pp. 159-162. 1896.
5. Variation of North American fishes, II. The variation of *Etheostoma caprodes* Rafinesque in Turkey lake and Tippecanoe lake. *Proc. Ind. Acad. Sci.* for 1895, pp. 278-296, 9 figures. 1896.
6. Material for the study of the variation of *Etheostoma caprodes* Rafinesque and *Etheostoma nigrum* Rafinesque in Turkey and Tippecanoe lakes. *Proc. Ind. Acad. Sci.* for 1897, pp. 207-228, 6 figures. 1898.
7. Contribuição para o conhecimento de aranhas de S. Paulo. *Revista do Museu Paulista*, III, pp. 77-112, 1 plate. 1898.
8. The spinning of the egg-sac in *Lycosa*. *Proc. Ind. Acad. Sci.* for 1901, pp. 113-114. 1901.
9. Experiments in the hybridization of fishes. *Proc. Ind. Acad. Sci.* for 1901, p. 114. 1902.
10. An aberrant *Etheostoma*. *Proc. Ind. Acad. Sci.* for 1901, pp. 115-116. 1902.
11. The individuality of the maternal and paternal chromosomes in the hybrid between *Fundulus heteroclitus* and *Menidia notata* (abstract). *Proc. Ind. Acad. Sci.* for 1902, p. 111. 1903.
12. An extra pair of appendages modified for copulatory purposes in *Cambarus viridis*. *Proc. Ind. Acad. Sci.* for 1902, pp. 111-112, 2 figures. 1903.
13. Description of a new darter from Tippecanoe lake. *Bull. U.S. Fish Com.*, XXII, pp. 397-398, 1 figure. Aug., 1903.
14. The development of the hybrids between *Fundulus heteroclitus* and *Menidia notata* with especial reference to the behavior of the maternal and paternal chromosomes. *Am. Jour. Anat.*, III, pp. 29-67, 4 plates. 1904.

15. The control of sex. Central States Monitor, X, No. 6, pp. 215-218.
1907.
16. The effects of inbreeding and selection on the fertility, vigor, and sex-ratio of *Drosophila ampelophila*. Jour. Morph., XXII, pp. 123-154.
1911.
17. Cross fertilization among fishes. Proc. Ind. Acad. Sci. for 1910, pp. 353-393.
1911.

DEPARTMENT OF POLITICAL SCIENCE

FRANK GREENE BATES, Associate Professor of Political Science, and Secretary of the Graduate Council.

B.L., Cornell University, 1891; Ph.D., Columbia University, 1899.

1. Rhode Island and the impost of 1781. *Ann. Rep. Am. Hist. Asso.*, IX, pp. 351-360. 1894.
2. Rhode Island and the formation of the union. *Columbia Univ. Studies in Hist., Econ., and Public Law*, X, pp. ix, 11-220. 1898.
3. 'Emancipation of the mediaeval towns', by A. Giry and A. Reville. Translated and edited with Paul E. Titsworth. Pp. iii, 69. 1907.
4. Commission plan of city government. *Univ. Kan. Bull.*, XI, No. 6, pp. 30. 1910.
5. Commission government in Kansas. *Proc. Am. Pol. Sci. Asso.*, VII, pp. 111-116. 1910.
6. Civics of Kansas. Ginn, pp. 91. 1910.
7. Charter of Grand Junction, Colo. *Am. Pol. Sci. Rev.*, IV, pp. 75-76. 1910.
8. Proposed charter of Brockton, Mass. *Am. Pol. Sci. Rev.*, IV, pp. 226-230. 1910.
9. New charter of Cranston, R.I. *Am. Pol. Sci. Rev.*, IV, pp. 230-231. 1910.
10. Commission government law of New Jersey. *Am. Pol. Sci. Rev.*, V, pp. 431-432. 1911.
11. Commission government in Kansas. *Am. Acad. Pol. and Soc. Sci.*, XXXVIII, pp. 719-725. 1911.
12. Municipal charter revision in Newark, N.J. *Am. Pol. Sci. Rev.*, V, pp. 438-440. 1911.
13. Village government in New England. *Am. Pol. Sci. Rev.*, VI, pp. 367-385. 1912.
14. Review of municipal legislation in Rhode Island. *Nat. Mun. Rev.*, I, pp. 276-277. 1912.
15. Rural and urban New England in the census. *The Nation*, XCIV, p. 285. 1912.
16. City smoke ordinances and smoke abatement. *Nat. Mun. Rev.*, II, pp. 151-152. 1913.
17. Constitutional amendments in 1912. *Nat. Mun. Rev.*, II, pp. 327-328. 1913.
18. Governors' messages of 1913. *Nat. Mun. Rev.*, II, pp. 328-329. 1913.
19. Legislation on the common drinking cup and the common towel. *Nat. Mun. Rev.*, II, pp. 333-334. 1913.
20. Publication of municipal ordinances and documents. *Special Libraries*, V, pp. 12-21. 1914.

21. Constitutional amendments of 1913. *Am. Pol. Sci. Rev.*, VIII, pp. 445-451. 1914.
22. Constitutional amendments and referred acts of 1914. *Am. Pol. Sci. Rev.*, IX, pp. 101-110. 1915.
23. Reorganization of state administration. *Am. Pol. Sci. Rev.*, IX, pp. 317-322. 1915.
24. Budgetary laws. *Am. Pol. Sci. Rev.*, IX, pp. 759-762. 1915.
25. A budget system for the state. *The Citizen* (Indianapolis), I, No. 9, pp. 21-22. 1916.
26. Forms of city government. *Ind. Bureau of Legislative Information, Bull. No. 5*, pp. 27. 1916.
27. City planning. *Ind. Bureau of Legislative Information, Bull. No. 8*, pp. 31. 1916.
28. Legislative organization and procedure. *Am. Pol. Sci. Rev.*, X, pp. 120-123. 1916.
29. New administrative agencies. *Am. Pol. Sci. Rev.*, X, pp. 557-563. 1916.
30. Municipal government. (With Frank J. Goodnow.) pp. ix, 443. 1919.
31. Review of O. C. Hormell's 'Sources of municipal revenue in Maine'. *Ind. Univ. Alum. Quart.*, VII, No. 3, pp. 448-449. July, 1920.

FREDERIC HOWLAND GUILD, Assistant Professor of Political Science.

A.B., Brown University, 1913; A.M., Indiana University, 1915; Ph.D., University of Illinois, 1921.

1. County organization in Indiana. *Ind. Univ. Bull.*, XII, No. 13, pp. 9-12. 1914.
2. Administration of minimum wage laws in the United States. *Am. Pol. Sci. Rev.*, IX, No. 1, pp. 107-110. 1915.
3. Index to governors' messages. *Public Affairs Information Service*, I, Nos. 22, 23, pp. 32. 1915.
4. State supervision and administration of charities. *Ind. Univ. Studies*, No. 33, pp. 82. Nov., 1916.
5. Administration and supervision of state charities and corrections. *Am. Pol. Sci. Rev.*, X, pp. 327-335. 1916.
6. Special municipal corporations. *Am. Pol. Sci. Rev.*, XII, No. 4, pp. 678-684. 1918.
7. Special municipal corporations. *Am. Pol. Sci. Rev.*, XIV, No. 2, pp. 286-291. 1920.
8. Statistical agencies. *Am. Pol. Sci. Rev.*, XIV, No. 3, pp. 450-455. 1920.
9. Uniform legislation. *Am. Pol. Sci. Rev.*, XIV, No. 3, pp. 458-460. 1920.

AMOS SHARTLE HERSHEY, Professor of Political Science and International Law.

A.B., Harvard University, 1892; Ph.D., University of Heidelberg, 1894.

1. Die Kontrolle über die Gesetzgebung in den Vereinigten Staaten von Nord Amerika. Heidelberg, pp. 72. 1894.

2. The recognition of Cuban belligerency. *Ann. Am. Acad. Pol. and Soc. Sci.*, VII, pp. 450-461. Published separately as No. 175 of the publications of the *Am. Acad. Pol. and Soc. Sci.* May, 1896.
3. Intervention and the recognition of Cuban independence. *Ann. Am. Acad. Pol. and Soc. Sci.*, XI, pp. 353-381. Published separately as No. 228 of the publications of the *Am. Acad. Pol. and Soc. Sci.* May, 1898.
4. Higher education in Indiana. *Normal Vidette*, VII, pp. 113-119. April, 1900.
5. The Venezuelan affair in the light of international law. *Am. Law Reg.*, N.S., XLII, pp. 249-268. May, 1903.
6. The importance of dates and maps in the teaching and study of history, or the location of events in time and space. *Educ.-Jour.*, IV, pp. 113-118. Nov., 1903.
7. The Panama question. *Green Bag*, XVI, pp. 265-267. April, 1904.
8. Some questions in international law arising from the Russo-Japanese war: I. Failure to declare war and violation of Korean neutrality. *Green Bag*, XVI. May, 1904.
9. Some questions in international law arising from the Russo-Japanese war: II. The Hay note and Chinese neutrality. *Green Bag*, XVI. June, 1904.
10. Series of eight articles on some questions of international law arising from the Russo-Japanese War. *Green Bag*, XVI. May to Dec., 1904.
11. The relations of England and the United States as affected by the far-eastern question. *Proc. Am. Pol. Sci. Asso. for 1905*, pp. 59-72. 1905.
12. What justifies intervention in war? *Rev. of Rev.*, XXXI, pp. 199-201. 1905.
13. Review of Asakawa's 'Russo-Japanese conflict'. *Yale Rev.*, XIV, pp. 93-94. May, 1905.
14. Review of Maxey's 'International law, with illustrated cases'. *Am. Pol. Sci. Rev.*, I, pp. 148-151. 1906.
15. The international law and diplomacy of the Russo-Japanese War. New York, pp. xii, 394. 1906.
16. The coming peace conference at the Hague. *Independent*, LXI, pp. 607-614. 1906.
17. The Calvo and Drago doctrines. *Am. Jour. Internat. Law*, I, pp. 24-45. 1907.
18. The Japanese school question and the treaty-making power. *Am. Pol. Sci. Rev.*, I, pp. 393-409. 1907.
19. The forcible collection of contract debts. *Proc. Am. Soc. Internat. Law for 1907*, pp. 124-133. 1907.
20. Why the nations cannot disarm. *Reader Mag.*, X, pp. 339-343. 1907.
21. An international prize court. *Green Bag*, XIX. 1907.
22. Review of Moore's 'International law digest'. *Columbia Law Rev.*, VII, pp. 222-224. 1907.

23. Review of Latane's 'America as a world power'. *Am. Hist. Rev.*
XIII, pp. 625-626. 1908.
24. Reviews of Ariga's 'La guerre russo-japonaise au point de vue con-
tinental et le droit international'; Takahashi's 'International law as
applied to the russo-japanese war'; and Roy's 'La guerre russo-
japonaise au point de vue de droit international'. *Am. Jour.*
Internat. Law, II, pp. 942-951. 1908.
25. Les doctrines de Calvo et de Drago. French translation of 'The
Calvo and Drago doctrines' in 'La doctrine de Drago', by H. A.
Moulin, Paris, pp. 173-202. 1908.
26. The United States as a peace power. *Am. Hist. Rev.*, XIII, pp. 449.
The World of Today, pp. 1254-57. Dec., 1908.
27. The convention for the peaceful adjustment of international differences.
Am. Jour. Internat. Law, II, pp. 29-49. 1909.
28. Germany—the main obstacle to the world's peace. *Independent*, LXVI,
pp. 1071-1076. 1909.
29. Review of Coolidge's 'United States as a world power'. *Am. Hist.*
Rev., XIV, pp. 372-374. 1909.
30. Review of Hull's 'Two Hague conferences and their contributions to
international law'. *Am. Hist. Rev.*, XIV, pp. 384-385. 1909.
31. Review of Campbell's 'Neutral rights and obligations on the Anglo-
Boer war'. *Am. Pol. Sci. Rev.*, III, pp. 114-116. 1909.
32. Review of Moulin's 'La doctrine de Drago'. *Am. Jour. Internat.*
Law, III, pp. 772-776. 1909.
33. Review of Kuropatkin's 'Russian army and the Japanese war'. *Am.*
Pol. Sci. Rev., III, pp. 455-459. 1909.
34. Errors of peace advocates. *Independent*, LXVII, pp. 1034-1037. 1909.
35. The situation in Nicaragua. *Independent*, LXVIII, pp. 72-75. 1910.
36. Review of Scott's 'Hague peace conferences of 1899 and 1907'. *Am.*
Hist. Rev., XV, pp. 151-53. 1909-10.
37. Review of Norman Angell's 'The great illusion'. *Am. Pol. Sci. Rev.*,
pp. 312-316. 1911.
38. Mexico and international law. *Independent*, LXX, pp. 708-711. 1911.
39. The succession of states. *Am. Jour. Internat. Law*, V, pp. 285-297.
1911.
40. The history of international relations during antiquity and the Middle
Ages. *Am. Jour. Internat. Law*, V, pp. 901-933. 1911.
41. Review of Staudacher's 'Die Friedensblockade'. *Am. Jour. Internat.*
Law, V, pp. 545-546. 1911.
42. History of international law since the Peace of Westphalia. *Am. Jour.*
Internat. Law, VI, pp. 30-69. 1912.
43. Review of Phillipson's 'International law and custom of ancient Greece
and Rome'. *Am. Jour. Internat. Law*, VI, pp. 565-569. 1912.
44. The essentials of international public law. New York, pp. xlviii,
558. 1912.

45. A number of editorials as one of the editors of *Am. Jour. Internat. Law*.
46. The international law of aerial space. *Am. Jour. Internat. Law*, VI, pp. 381-388. 1912.
47. Review of F. Charmes' (et al.) 'Les questions actuelles de politique étrangère en Europe'. *Am. Jour. Internat. Law*, VI, pp. 1035-1037. 1912.
48. Should the Panama canal tolls controversy be arbitrated? (With W. H. Taft.) *Am. Asso. Conciliation*, pp. 22. 1913.
49. What is the international obligation of the United States, if any, under its treaties in view of the British contention, *re* the Panama Canal? *Proc. Am. Soc. Internat. Law*, pp. 232-238. 1913.
50. The codification of the rules of naval warfare of the third Hague conference. *Rep. of Lake Mohonk Conf. on Arbitration*, pp. 94-98. 1913.
51. La codification des règles de la guerre sur la mer. *Rev. Gen. de Droit Internat. Public*, XX, pp. 460-464. 1913.
52. Review of R. Zouche's 'Juris et judicii fecialis, sive juris inter gentes of questionum de eodem explicatio'. *Am. Jour. Internat. Law*, VII, pp. 421-422. 1913.
53. Review of P. Albin's 'Les grands traités politiques'. *Am. Jour. Internat. Law*, VII, pp. 426-427. 1913.
54. Review of E. Kaufmann's 'Das Wesen des Volksrechts und die Clausula rebus sic Standibus'. *Am. Jour. Internat. Law*, VII, pp. 438-439. 1913.
55. Review of W. Schucking's 'Der Staatenverband der Haager Konferenzen'. *Am. Pol. Sci. Rev.*, VII, pp. 158-159. 1913.
56. Review of H. Wehberg's 'Das Problem eines Internationalen Staatengerichtshof'. *Am. Pol. Sci. Rev.*, VII, pp. 313-314. 1913.
57. The result of the Italian elections. *Am. Pol. Sci. Rev.*, VIII, pp. 50-56. 1914.
58. 'Political and social conditions in the Orient'. *Rep. to the trustees of the Kahn Foundation for the foreign travel of American teachers*. *Rep. Kahn Foundation*, III, pp. 25-66. 1914.
59. Some problems of defense. *Ann. Am. Acad. Pol. Soc. Sci.*, LXI, pp. 263-269. 1915.
60. Review of K. Strupp's 'Das International Landkriegsrecht'. *Am. Jour. Internat. Law*, IX, pp. 537-538. 1915.
61. Zeppelin raids and the rights of neutrals. *Rev. of Rev.*, LII, pp. 590-592. 1915.
62. The so-called inviolability of mails. *Am. Jour. Internat. Law*, X, pp. 580-584. 1915.
63. Some popular misconceptions of neutrality. *Am. Jour. Internat. Law*, X, pp. 18-21. 1916.
64. Should the right to arbitrate war zones on the high seas be recognized and what, if any, should be the provisions of international law on the question? *Proc. Am. Soc. Internat. Law*, pp. 87-92. 1916.

65. Neutrality and international law. *Internat. Jour. Ethics*, XXVI, pp. 168-176. 1915-16.
66. Review of H. A. Millis' 'The Japanese problem in the United States'. *Ind. Univ. Alum. Quart.*, III, pp. 77-78. 1916.
67. Review of David Starr Jordan's 'The ways to lasting peace'. *Ind. Univ. Alum. Quart.*, III, No. 4, pp. 549-550. Oct., 1916.
68. Review of Paul H. Clements' 'The Boxer rebellion'. *Ind. Univ. Alum. Quart.*, III, No. 4, pp. 273-274. April, 1916.
69. The Deutschland. *Am. Jour. Internat. Law*, X, pp. 852-853. 1916.
70. Treatment of enemy aliens. *Am. Jour. Internat. Law*, X, pp. 156-162. 1916.
71. Review of E. C. Stowell's 'The diplomacy of the war of 1914'. *Am. Pol. Sci. Rev.*, X, pp. 164-166. 1916.
72. Review of L. Oppenheim's (Ed.) 'Collected papers of John Westlake'. *Am. Pol. Sci. Rev.*, X, pp. 403-406. 1916.
73. Review of A. Bullard's 'Diplomacy of the great war'. *Am. Hist. Rev.*, XXII, pp. 158-160. 1916-17.
74. Projects submitted to the American Institute of International Law. *Am. Jour. Internat. Law*, XI, pp. 390-394. 1917.
75. How Germany makes war. *Ind. Univ. Alum. Quart.*, IV, No. 4, pp. 509-524. Oct., 1917.
76. Review of C. H. Huberich's 'The law relating to trading with the enemy'. *Am. Pol. Sci. Rev.*, XI, pp. 728-729. 1918.
77. Legal status of the Brest-Litovsk and Bucharest treaties. *Am. Jour. Internat. Law*, XII, pp. 815-820. 1918.
78. Treatment of alien enemies. *Am. Jour. Internat. Law*, XII, pp. 156-162. 1918.
79. Review of O. Nippold's 'Die Gestaltung des Völkerrechts nach dem Weltkriegs'. *Am. Jour. Internat. Law*, XII, pp. 689-691. 1918.
80. A turning-point in far-eastern diplomacy. *Hist. Teachers' Mag.*, IX, pp. 91-92. 1918.
81. Handbook of the diplomatic history of Europe, Asia, and Africa, 1914. (With Frank Maloy Anderson.) Washington, D.C., Government Printing Office, pp. 482. 1918.
82. Review of John Bassett Moore's 'Principles of American diplomacy'. *Am. Hist. Rev.*, XXIV, pp. 131-132. 1918-19.
83. The Shantung cession. *Am. Jour. Internat. Law*, XIII, pp. 530-536. 1919.
84. Incursions into Mexico and the doctrine of 'hot pursuit'. *Am. Jour. Internat. Law*, XIII, pp. 557-569. 1919.
85. Some reasons for the prompt ratification of the treaties with Germany and Austria. *Ind. Univ. Alum. Quart.*, VI, No. 4, pp. 484-490. Oct., 1919.
86. The German conception of the freedom of the seas. *Am. Jour. Internat. Law*, XIII, pp. 207-226. 1919.

87. Diplomatic agents and immunities. Washington, D.C., Government
Printing Office, pp. 218. 1919.
88. Modern Japan. (With Susanne W. Hershey.) Bobbs-Merrill, pp. 382.
1919.
89. Recognition of de facto governments by European states. Am. Jour.
Internat. Law, XIV, pp. 499-518. 1920.
90. Review of P. M. Ogilvie's 'International waterways'. Am. Pol. Sci.
Rev., XIV, pp. 519-520. 1920.

OFFICE OF PUBLICATIONS

IVY LEONE CHAMNESS, Editor of Indiana University Publications and of
Indiana University Alumni Quarterly.
A.B., Indiana University, 1906.

1. Indiana University and the war. Ind. Univ. News-Letter, VI, No. 2,
pp. 8. Feb., 1918.
2. War activities of Indiana University. Indianapolis Sunday Star.
Feb. 3, 1918.
3. Review of 'Readings in Indiana History'. Ind. Univ. Alum. Quart., I,
pp. 456-458. Oct., 1914.
4. Review of W. T. Hale's 'Madame D'Arblay's place in the development
of the English novel'. Ind. Univ. Alum. Quart., III, pp. 263-265.
April, 1916.
5. A college education. Ind. Univ. Bull., XVII, No. 11, pp. 4-5.
Oct., 1919.
6. Numerous unsigned reviews and editorials in the Indiana University
Alumni Quarterly since October, 1914.
7. The centennial educational conference at Indiana University. Sch.
and Soc., XI, No. 285. June 12, 1920.

DEPARTMENT OF ROMANCE LANGUAGES

FRANCISCO AGUILERA, Graduate Scholar in Romance Languages (1919-20).
B.Hum., University of Chile.

1. El empeño suicida. En la Federación de Estudiantes. Odio fecundo. Pusilanimidad. Pérez Viguera y yo. La mujer Limeña. (Six articles on Peruvian politics.) Concepción, Chile. El Sur.
Nov., 1918, to Jan., 1919.
2. La ley norteamericana contra el alcoholismo. La Pluma (Santiago, Chile), May, 1919, pp. 13-15. 1919.
3. La egolatria estudiantil. La Pluma (Santiago, Chile), June, 1919, pp. 5-6. 1919.
4. Los que van a Estados Unidos. Juventud (Santiago, Chile), Aug., 1919, pp. 71-75. 1919.
5. Tipos, sentimientos, ideas. Juventud (Santiago, Chile), Aug., 1919, pp. 68-71. 1919.
6. Los que se saben mutilados. La Pluma (Santiago, Chile), Aug., 1919, pp. 3-4. 1919.
7. Desde los Estados Unidos: Cómo se vive en una Universidad. Three articles: Dec., 1919, June, 1920, Dec., 1920. El Sur (Concepción, Chile). 1919-20.
8. Evalyn McDonald, a story. La Tribuna (New York), Nov. 13, 1920, pp. 7, 12, 13, 14. 1920.
9. Flirt, a story. La Tribuna (New York), Nov. 27, 1920, p. 7. 1920.
10. Ternura, a story. Cervantes (Madrid, Spain), Nov., 1920, pp. 89-96. 1920.
11. Una noche buena, a story. La Tribuna (New York), Dec. 25, 1920, pp. 8, 17. 1920.

ANTONIO ALONZO, Acting Instructor in Spanish.
Graduate, Escuela Normal de Avila, 1916.

1. Las conferencias internacionales de estudiantes en Northfield. La Revista del Mundo (New York), VI, pp. 62-64. Oct. 2, 1919.
2. El 'subway' de Madrid. La Tribuna (New York), II, p. 4.
Dec. 27, 1919.
3. Pensando en la niñez. Pictorial Review (Spanish edition; New York), VIII, p. 12. June, 1920.
4. Los Estados Unidos por dentro: notas y comentarios. La Tribuna (New York), IV, p. 4. Aug. 14, 1920.
5. Los Estados Unidos por dentro: la vida de un pueblo. La Tribuna (New York), IV, p. 7. Aug. 21, 1920.
6. Los Estados Unidos por dentro: cómo se hizo una Universidad. La Tribuna (New York), IV, p. 10. Aug. 28, 1920.
7. Los Estados Unidos por dentro: la vuelta al estudio. La Tribuna (New York), IV, p. 6. Oct. 23, 1920.

8. Los Estados Unidos por dentro: el poder de las Unión. La Tribuna (New York), IV, p. 6. Nov. 27, 1920.
9. Los Estados Unidos por dentro: el espíritu universitario. La Tribuna (New York), IV, p. 8. Dec. 4, 1920.

HENRI L. BOURDIN, Instructor in French.

Licencié ès lettres, Paris, 1910; Diplômé d' Etudes Supérieures, 1911.

1. Letters of Abel Ferry. The Hoosier, II, pp. 3-8. Dec., 1919.

JUAN CANO, Assistant Professor of Spanish.

A.B., Pontifical University (Toledo, Spain), 1909; A.M., Columbia University, 1919.

1. Auroras (poesías líricas). New York and Madrid, Salis Medio y Cía. 1918.

JOHN M. HILL, Associate Professor of Spanish.

A.B., Vanderbilt University, 1908; A.M., 1910; Ph.D., University of Wisconsin, 1912.

1. Review of Lawrence A. Wilkins' 'Spanish in the high schools: a hand-book of methods'. Hispania, II, No. 2, pp. 103-106. March, 1919.
2. Translation vs. oral practice. Hispania, II, No. 5, pp. 249-253. Nov., 1919.
3. Review of C. F. Sparkman's 'Industrial Spanish'. Ind. Univ. Alum. Quart., VII, No. 2, pp. 275-276. April, 1920.
4. Review of Melchor García y Moreno's 'Catálogo paremiológico Madrid 1918'. Hispania, III, No. 6, pp. 335-337. Dec., 1920.

ELIJAH CLARENCE HILLS, Professor of Romance Languages.

A.B., Cornell University, 1892; Ph.D., University of Colorado, 1906; Litt.D., Rollins College, 1906.

1. De la ortografía y pronunciación Inglesas. Harvard Univ., Cuban Summer School, pp. 14, 1900. Reprinted by Silver, Burdett, and Co. 1900.
2. Bardos cubanos: antología de las mejores poesías líricas de Heredia, 'Plácido', Avellaneda, Milanés, Mendive, Luaces, y Zenea. Boston, D.C. Heath y Cía, pp. iv, 162. 1901.
3. Notes on Canadian French. Publ. Mod. Lang. Asso. Am., XVIII, No. 3 (N.S. XI, No. 3), pp. 363-377. July, 1903.
4. A plea for more Spanish in the schools of Colorado. Colo. Col. Studies, XII, pp. 18-27. June, 1904.
5. A Spanish grammar. (With J. D. M. Ford.) Boston, D.C. Heath and Co., pp. ix, 340. 1904.
6. New-Mexican Spanish. Publ. Mod. Lang. Asso. Am., XXI, No. 3, pp. 706-753. 1906.
7. The evolution of Maeterlinck's dramatic theory. Colo. Col. Publ., II, pp. 29-40. April, 1907.
8. Spanish tales for beginners. Edited with notes and vocabulary. New York, Henry Holt and Co., pp. x, 298. 1909.

9. Las mejores poesías líricas de la lengua castellana. (With S. Griswold Morley.) New York, Henry Holt and Co., pp. ix, 224. 1910.
10. Spanish short stories. Edited, with introduction, notes, and vocabulary. (With Mrs. Louise Reinhardt.) Boston, D.C. Heath and Co., pp. xviii, 323. 1910.
11. Dante's versification. Rom. Rev., III, Nos. 2-3, pp. 301-308. April-Sept., 1912.
12. Modern Spanish lyrics. Edited, with introduction, notes, and vocabulary. (With S. Griswold Morley.) New York, Henry Holt and Co., pp. lxxxiii, 435. 1913.
13. The Pike's Peak region in song and myth. Colo. Col. Publ., Lang. Ser. II, 29, pp. 165-220. Jan., 1913.
14. Report of the joint committee on grammatical nomenclature. (Joint author; appointed by the Nat. Educ. Asso., the Mod. Lang. Asso. of Am., the Am. Philol. Asso.) Univ. of Chicago Press, pp. viii, 31. July, 1913.
15. The Quechua drama 'Ollanta'. Rom. Rev., V, 2, pp. 127-176. April-June, 1914.
16. Some Spanish-American poets. Colo. Col. Publ., II, pp. 221-237. March, 1915.
17. The speech of a child two years of age. Dialect Notes, IV, Pt. II, pp. 84-100. 1915.
18. Spanish graves; a sonnet. Boston Poetry Jour., p. 64. March, 1916.
19. First Spanish course. (With J. D. M. Ford.) Boston, D.C. Heath and Co., pp. vi, 330. Reprinted in Great Britain by Turnbull and Spears, Edinburgh, for Harrap and Co., London. 1917.
20. Una gramática del siglo de oro. Hispania, I, 2, pp. 98-99. May, 1918.
21. Some Spanish-American novels. Hispania, II, 3, pp. 149-151. May, 1919.
22. A catalogue of English translations of Spanish plays. Rom. Rev., X, 3, pp. 263-273. July-Sept., 1919.
23. Has the war proved that our methods of teaching modern languages in the colleges are wrong? A symposium. Mod. Lang. Jour., IV, 1, pp. 1-13. Oct., 1919.
24. Did Bryant translate Heredia's 'Ode to Niagara'? Mod. Lang. Notes, XXXIV, 8, pp. 503-505. Dec., 1919.
25. A bibliography of the published works of Dr. Federico Hanssen. Mod. Lang. Notes, XXXV, 3, pp. 183-184, March, and XXXV, No. 8, p. 505. Dec., 1920.
26. The odes of Bello, Olmedo, and Heredia. (With introduction and bibliography.) New York, The Hispanic Society of America, G.P. Putnam's Sons, pp. viii, 153. 1920.
27. The accusative A. Hispania, III, 4, pp. 216-222. Oct., 1920.
28. 'Fortuna', by Pérez Eserich, and 'Zaragüeta', by Ramos Carrión and Vital Aza. Edited with notes and vocabulary. (With Louise Reinhardt.) Boston, D.C. Heath and Co., pp. viii, 221. 1920.

29. Our threefold needs. *Mod. Lang. Jour.*, V, 1, pp. 12-17. Oct., 1920.

ALEXANDER HAGGERTY KRAPPE, Instructor in French.

A.M., University of Iowa. 1917; Ph.D., University of Chicago, 1919.

1. Bertrand de Bar-sur-Aube and Aymeri de Narbonne. *Mod. Philol.*, XVI, pp. 151-156. 1918.
2. The legend of the glove. *Mod. Lang. Notes*, XXXIV, pp. 16-23. 1919.
3. The ploughman king: a study in comparative literature and folklore. *Revue Hispanique*, XLVI, pp. 516-546. 1919.
4. La source de la 'Nouvelle' de Luigi Alamanni. *Etudes Italiennes*. Juillet, 1920.

LANDER MACCLINTOCK, Assistant Professor of Romance Languages.

A.B., University of Chicago, 1910; A.M., 1913; Ph.D., 1917.

1. 'The labyrinth', by Paul Hervieu, authorized translation. (With Barrett H. Clark.) New York, B.W. Huebsch, pp. 172. 1913.
2. Carlo Goldoni. *The Drama*, V, pp. 1-103. March, 1913.
3. Robert Bracco. *North Am. Rev.*, CCX, pp. 691-705. Nov., 1919.
4. The contemporary drama of Italy. Boston, Little, Brown, and Co., vi, pp. 321. 1920.
5. Sainte-Beuve's critical theory and practice after 1849. Chicago, The University of Chicago Press, pp. ix, 161. 1920.

GEORGE DAVIS MORRIS, Professor of French.

A.B., Indiana University, 1890; A.M., 1895; Docteur de l'Université de Paris, 1912.

1. Fenimore Cooper et Edgar Poe d'après la critique française du dix-neuvième siècle. Paris, Émile Larose, pp. 210. 1912.
2. American traits as seen by the French. *Mid-West Quart.*, II, pp. 169-184. Jan., 1915.
3. French criticism of Poe. *South Atlantic Quart.*, XIV, pp. 324-330. Oct., 1915.
4. Washington Irving's fiction in the light of French criticism. *Ind. Univ. Studies*, No. 30, pp. 28. May, 1916.

CHARLES ALFRED MOSEMILLER, Associate Professor of Romance Languages.

A.B., Indiana University, 1890.

1. Concerning the etymology of the French word *son* (= bran). *Mod. Lang. Notes*, XVIII, p. 224. Nov., 1903.
2. The origin of the French word *canneberge*. *Mod. Lang. Notes*, XIX, pp. 46-47. Feb., 1904.
3. The etymology of *mâchefer*. *Mod. Lang. Notes*, pp. 248-249. Dec., 1905.
4. The etymologies of *cotret*, *dèche*, *palier*, *sablère*. *Mod. Lang. Notes*, pp. 141-144. May, 1907.
5. *Trumeau*, *trumer*, *trimer* et quelques autres dérivés du latin *torus* en Gaule. *Mod. Lang. Notes*, pp. 131-134. May, 1918.
6. Manceau *ameturée* et Berrichon *fenée*. *Romania*, XXXVIII, pp. 589-599. 1909.

7. Notes étymologiques. *Revue de Dialectologie Romane*, II, pp. 419-424. 1909.

WENCESLAO VIAL OVALLE, Graduate Scholar in Romance Languages, 1919-20.
Licenciado en Leyes y Ciencias Políticas, Universidad de Chile, 1919.

1. El comercio neutral y el contrabando de guerra. (Memoria de Prueba para optar al grado de Licenciado en Leyes y Ciencias Políticas de la Universidad de Chile.) Santiago de Chile, Imprenta Cervantes. 1919.

GRACE MAXWELL PHILPUTT, Instructor in French.

A.B., Indiana University, 1908; A.M., 1914.

1. A course of study in French for high schools. Publ. issued by Horace Ellis, Supt. of Public Instruction in Ind., Bull. No. 35, pp. 98-103. 1918.

WILLIAM H. SCHEIFLEY, Associate Professor of Romance Languages.

A.B., Indiana University, 1901; A.M., 1903; Ph.D., University of Pennsylvania, 1914.

1. Brieux and contemporary French society. New York and London, G. P. Putnam's Sons, pp. vii, 436. 1917.
2. The blinded soldiers of France. Philadelphia Public Ledger, March 14, 1918, p. 10. 1918.
3. Two war novels by French women of letters. *Book News Mo.*, XXXVI, pp. 369-370. June, 1918.
4. France in the Levant. *Am. Catholic Quart. Rev.*, XLIII, pp. 488-499. July, 1918.
5. In memory of Adrien Bertrand. *The Nation*, CVII, p. 42. July 13, 1918.
6. A French allegory on the war. *The Nation*, CVII, pp. 258-259. Sept. 7, 1918.
7. Paul Hervieu and his work. *South Atlantic Quart.*, XVIII, pp. 52-68. Jan., 1919.
8. Prejudice unconquered. *Catholic World*, CVIII, pp. 514-516. Jan., 1919.
9. Ernest Psichari and the French Renaissance. *Sewanee Rev.*, XXVII, pp. 207-217. April, 1919.
10. La Marseillaise de la paix. *The Nation*, CVIII, p. 503. April 5, 1919.
11. A worthy addition to the forty immortals. *The Nation*, CVIII, pp. 607-608. April 19, 1919.
12. Monologue in the French drama. *The Drama*, X, pp. 38-50. May, 1919.
13. The Dutton library of French fiction. *The Nation*, CVIII, p. 798. May 17, 1919.
14. Review of Victor Cambon's 'Où allons-nous?' *The Nation*, CVIII, p. 992. June 21, 1919.
15. The French stage during the war. *The Rev.*, I, pp. 218-220. July 19, 1919.
16. The Tiger of France. *The Nation*, CIX, pp. 91-92. July 19, 1919.

17. Depopulation in France. North Am. Rev., CCX, pp. 759-768.
Dec., 1919.
18. Henry Bordeaux at the goal. Catholic World, CX, pp. 471-475,
Jan., 1920.
19. A mystic singer of Jeanne d'Arc. Sewanee Rev., XXVIII, pp. 31-36.
Jan., 1920.
20. A prophet of the *revanche*. Ind. Univ. Alum. Quart., VII, No. 1.
pp. 17-22. Jan., 1920.
21. Sacha Guitry and the biographical drama. Stratford Jour., VI, pp.
67-72. Jan., 1920.
22. The opening scene of French drama since 1850. The Drama, X, pp.
153-156. Jan., 1920.
23. French problems. South Atlantic Quart., XIX, pp. 157-162.
April, 1920.
24. Brioux returns to the drama. Reedy's Mirror, XXIX, pp. 407-408.
May 20, 1920.
25. Review of Duclaux' 'A short history of France'. Sewanee Rev.,
XXVIII, pp. 463-466. July, 1920.
26. The Tiger of France. Ind. Univ. Alum. Quart., VII, No. 3, pp. 347-
360. July, 1920.
27. The Malvy affair. Reedy's Mirror, XXIX, pp. 526-527. July 1, 1920.
28. The depleted forests of France. North Am. Rev., CCXII, pp. 378-
386. Sept., 1920.
29. French publishers weathering the storm. Weekly Rev., III, pp. 394-
395. Oct. 27, 1920.
30. Léon Daudet, defender of church and state. Catholic World, CXII,
pp. 157-170. Nov., 1920.
31. The poetry and prose of French forests. Am. Forestry, XXVI, pp.
744-746. Dec., 1920.
32. The white coal of France. Louisville Courier-Jour., CXXXII, pp.
6-15. Dec. 5, 1920.

LESTER B. STRUTHERS, Assistant Professor of Romance Languages.

A.B., Harvard University, 1910; A.M., 1911; Ph.D., 1916.

1. The rhetoric structure of the *Encomia* of Claudius Claudian. Harvard
Studies in Classical Philol., XIX. 1919.

DEPARTMENT OF SOCIAL SERVICE

HELEN HARE, Instructor in Social Service.

Ph.B., University of Chicago, 1915; A.M., Indiana University, 1919.

1. A study of handicapped children: based on one hundred and fifty crippled children referred to the Social Service Department of Indiana University. Ind. Univ. Studies No. 41, pp. 64. 1920.

EDNA GERTRUDE HENRY, Director of Social Service (at Indianapolis).

A.B., Indiana University, 1897; A.M., 1914; Ph.D., 1917.

1. Report of the Social Service Department of Indiana University for 1911-1913. Ind. Univ., pp. 83. 1913.
2. The Social Service Department. Ind. Univ. News-Letter, III, No. 8, pp. 11. Aug., 1915.
3. The burden of prostitution; possible prevention. Ind. Bull. Char. and Corr., p. 127. July, 1916.
4. Report of the Social Service Department of Indiana University, 1913-15. Ind. Univ. Bull., XIV, No. 11, pp. 51. 1916.
5. The sick. Ann. Am. Acad. Pol. and Soc. Sci., Publ. No. 1195, pp. 15. May, 1918.
6. Report of the Social Service Department of Indiana University, 1915-18. Ind. Univ. Bull., XVII, No. 12, pp. 16. 1919.
7. Social service work. Ind. Univ. News-Letter, VII, No. 10. Oct., 1919.
8. The present trend of medical social work. Mod. Hospital, XIV, p. 185. March, 1920.
9. Bridging the chasm. Hospital Soc. Service Quart., II, p. 198. May, 1920.
10. Medical social work as a therapeutic factor. Hospital Soc. Service Quart., II, p. 443, Nov., 1920; Mod. Hospital, XV, p. 488. Dec., 1920.

(MRS.) HELEN HUNT ANDREWS TAFEL.

A.B., Butler College, 1917; A.M., Indiana University, 1919.

1. The social significance of mental disease and defect: a study based on three hundred and forty-five mental and nervous cases referred to the Social Service Department of Indiana University. Ind. Univ. Studies No. 43, pp. 58. 1920.

LELA FRANCES THOMPSON.

A.B., DePauw University, 1915; A.M., Indiana University, 1917.

1. The social aspect of the cardiac case: a study based on one hundred and fifty-four cardiac cases referred to the Social Service Department of Indiana University. Ind. Univ. Studies No. 42, pp. 44. 1920.

DEPARTMENT OF ZOÖLOGY

WILLIAM RAY ALLEN, Special Fellow.

A.B., Indiana University, 1913; A.M., 1914; Ph.D., 1920.

1. The food and feeding habits of fresh-water mussels. Biol. Bull., XXVII, pp. 127-147. 1914.

ARTHUR MANGUN BANTA.

A.B., Indiana University, 1903; A.M., 1904.

1. The fauna of Mayfield's cave. Carnegie Institution Publ., No. 67, pp. 114, 1 plate. Sept., 1907.
2. The life history of the cave salamander *Spelerpes maculicaudus* (Cope). (With Waldo L. McAtee.) Proc. U.S. Nat. Mus., XXX, pp. 67-83, plates 8-10. 1906.

CHRISTIAN B. BLOSSER.

A.B., Indiana University, 1909.

1. Reports on the expedition to British Guiana of the Indiana University and the Carnegie Museum, 1908. Report No. 3. The marine fishes. Ann. Carnegie Mus., VI, pp. 295-300. 1909.

CHARLES S. DRIVER.

A.B., Bridgewater College, 1916; A.M., Indiana University, 1918.

1. On the Luciopimelodinae, a new subfamily of the South American Siluridae. Proc. Am. Phil. Soc., LVIII, pp. 448-456. 1919.

MARION LEE DURBIN.

See Mrs. Marion Durbin Ellis

CARL H. EIGENMANN, Dean of the Graduate School, and Professor of Zoölogy.

A.B., Indiana University, 1886; A.M., 1887; Ph.D., 1889.

1. A review of the American Elotridinae. (With Morton W. Fordice.) Proc. Acad. Nat. Sci. Phila. for 1885, VIII, pp. 55-80. 1886.
2. Notes on skeletons of Etheostomatinae. (With David Starr Jordan.) Proc. U.S. Nat. Mus., VIII, pp. 68-72. 1886.
3. A catalogue of the fishes of Bean Blossom creek, Monroe county, Indiana. (With M. W. Fordice.) Proc. Acad. Nat. Sci. Phila. for 1885, pp. 233-252. 1886.
4. A review of the genera and species of Diodontidae found in American waters. Ann. N.Y. Acad. Sci., III, pp. 297-311. 1885.
5. A review of the American Gasterosteidae. Proc. Acad. Nat. Sci. Phila. for 1886, pp. 233-252. 1887.
6. A review of the Gobiidae of North America. (With D. S. Jordan.) Proc. U.S. Nat. Mus., IX, pp. 477-518. Nov., 1886.
7. Folk-lore of a German village. Current, V, No. 124. 1886.
8. A review of the Chaetodontidae of North America. (With Jennie E. Horning.) Ann. N.Y. Acad. Sci., III, pp. 1-18. 1887.
9. Notes on the specific names of certain North American fishes. Proc. Acad. Nat. Sci. Phila. for 1887, pp. 295-296. 1887.

10. A review of the North American species of the genera *Lagodon*, *Archosargus*, and *Diplodus*. (With Elizabeth G. Hughes.) *Proc. U.S. Nat. Mus.*, X, pp. 65-74. May, 1887.
11. Description of a new species of *Ophichthys* (*Ophichthys retropinnis*) from Pensacola, Fla. *Proc. U.S. Nat. Mus.*, X, p. 116. July, 1888.
12. Notes on a collection of fishes sent by Mr. C. C. Leslie from Charleston, S.C. (With D. S. Jordan.) *Proc. U.S. Nat. Mus.*, X, pp. 269-270. Aug., 1888.
13. A list of the American Gobiidae and Callionymidae, with notes on the specimens contained in the Museum of Comparative Zoölogy, at Cambridge, Mass. (With R. S. Eigenmann.) *Proc. Calif. Acad. Sci.*, 2d ser., I, pp. 51-78. Jan., 1888.
14. South American Nematognathi. (With R. S. Eigenmann.) *Am. Nat.*, XXIII, pp. 647-649. July, 1888.
15. Preliminary notes on South American Nematognathi, I. (With R. S. Eigenmann.) *Proc. Calif. Acad. Sci.*, 2d ser., I, pp. 119-172. July, 1888.
16. Notes on some California fishes, with descriptions of two new species. (With R. S. Eigenmann.) *Proc. U.S. Nat. Mus.*, XI, pp. 463-466. Sept., 1888.
17. *Cyprinodon californiensis*, Girard. (With R. S. Eigenmann.) *W. Am. Sci.*, V, pp. 3-4. Sept., 1888.
18. Description of a new species of *Cyprinodon*. (With R. S. Eigenmann.) *Calif. Acad. Sci.*, 2d ser., I, p. 270. Jan., 1889.
19. On the development of California food fishes. *Am. Nat.* XXIII, pp. 107-110. March, 1889.
20. Preliminary descriptions of new species and genera of Characinidae. (With R. S. Eigenmann.) *W. Am. Sci.*, VI, pp. 7-8. April, 1889.
21. Description of new Nematognathoid fishes from Brazil. (With R. S. Eigenmann.) *W. Am. Sci.*, VI, pp. 8-10. April, 1889.
22. Preliminary notes on South American Nematognathi, II. (With R. S. Eigenmann.) *Proc. Calif. Acad. Sci.*, 2d ser., II, pp. 28-56. Aug., 1889.
23. On the phosphorescent spots of *Porichthys margaritatus*. (With R. S. Eigenmann.) *W. Am. Sci.*, VI, pp. 32-34. May, 1889.
24. Contributions from San Diego Biological Laboratory, I. (With R. S. Eigenmann.) *W. Am. Sci.*, VI, pp. 44-47. June, 1889.
25. Contributions from the San Diego Biological Laboratory, II. On the genesis of the color-cells of fishes. *W. Am. Sci.*, VI, pp. 61-62. July, 1889.
26. Notes from the San Diego Biological Laboratory, I. The fishes of Cortez Banks; additions to the fauna of San Diego; fishes of Aetna springs, Napa county, California; fishes of Allen springs, Lake county, California. (With R. S. Eigenmann.) *W. Am. Sci.*, VI, pp. 123-132. Nov. 9, 1889.

27. A review of the Sciaenidæ of America and Europe. (With D. S. Jordan.)
Ann. Rep. Com. Fish and Fisheries for 1886, pp. 343-451, 4 plates.
1889.
28. Notes from the San Diego Biological Laboratory, II. The young stages
of some selachians. (With R. S. Eigenmann.) W. Am. Sci., VI,
pp. 147-151; Am. Nat., XXV, pp. 150-151.
29. A review of the Erythrininæ. (With R. S. Eigenmann.) Proc. Calif.
Acad. Sci., 2d ser., II, pp. 100-116, 1 plate. Nov., 1889.
30. A revision of the edentulous genera of Curimatinae. (With R. S.
Eigenmann.) Ann. N.Y. Acad. Sci., IV, pp. 1-32. Nov., 1889.
31. On the genus Clevelandia. Am. Nat., XXIII, pp. 916-918. Oct., 1889.
32. The development of *Micrometrus aggregatus*, one of the viviparous
surf-perches. Am. Nat., XXIII, pp. 923-927. Oct., 1889.
33. Additions to the fauna of San Diego. (With R. S. Eigenmann.) Proc.
Calif. Acad. Sci., 2d ser., III, pp. 1-24. March 24, 1890.
34. The evolution of the catfishes. Zoe, I, pp. 10-15. 1890.
35. Description of a fossil species of Sebastodes. Zoe, I, p. 16. 1890.
36. On the egg membranes and micropyle of some osseous fishes. Bull.
Mus. Comp. Zool., XIX, pp. 129-154, 3 plates. March, 1890.
37. The barracuda. Zoe, I, pp. 55-56. 1890.
38. The Point Loma blind fish and its relatives. Zoe, I, pp. 65-72, 2 plates.
1890.
39. Charles Harvey Bollman. W. Am. Sci., VII, pp. 5-6. 1890.
40. The coloration of fishes. W. Am. Sci., p. 35. 1890.
41. The food fishes of California fresh waters. Rep. State Board Fish
Com. Calif. for 1890, pp. 53-65. 1890.
42. A revision of the South American Nematognathi or Catfishes. (With
R. S. Eigenmann.) Occasional Papers Calif. Acad. Sci., I, pp. 508,
figures, map. July, 1890.
43. Descriptions of new species of Sebastodes. (With R. S. Eigenmann.)
Proc. Calif. Acad. Sci., 2d ser., III, pp. 36-38. May 28, 1890.
44. A review of the genera and species of Serranidæ found in the waters
of America and Europe. (With D. S. Jordan.) Bull. U.S. Fish Com.,
VIII, pp. 329-441, 20 plates. 1890.
45. On the precocious segregation of the sex cells in *Micrometrus aggregatus*
Gibbons. Jour. Morph., V, pp. 480-492, 1 plate. 1891.
46. A catalogue of the fresh-water fishes of South America. (With R. S.
Eigenmann.) Proc. U.S. Nat. Mus., XIV, pp. 1-81. July, 1891.
47. On the genesis of the chromatophores in fishes. Am. Nat., XXV,
pp. 112-118, 4 plates. Feb., 1891.
48. The spawning season of San Diego fishes. Am. Nat., XXV, pp. 578-
579. June, 1891.
49. *Cottus beldingi*, sp. nov. (With R. S. Eigenmann.) Am. Nat., XXV,
pp. 1132-1133. Dec., 1891.
50. A new Diodont. Am. Nat., XXV, p. 1133. Dec., 1891.

51. A catalogue of the fishes of the Pacific coast of America north of Cerros Island. (With R. S. Eigenmann.) Ann. N.Y. Acad. Sci., VI, pp. 349-358. June, 1892.
52. The fishes of San Diego. Proc. U.S. Nat. Mus., XV, pp. 123-178, 9 plates. Aug., 1893.
53. *Branchiostoma elongatum* Sundevall, at San Diego. Am. Nat., XXVI, p. 70. Jan., 1892.
54. On the presence of an operculum in the Aspredinidæ (abstract). Am. Nat., XXVI, p. 70. Proc. Ind. Acad. Sci. for 1891, p. 175. Jan., 1892.
55. The Percopsidæ on the Pacific slope. Sci., p. 233. 1892.
56. Recent additions to the fauna of California. (With R. S. Eigenmann.) Abstract. Ind. Acad. Sci. for 1891, pp. 159-161. 1892.
57. New fishes from Western Canada. (With R. S. Eigenmann.) Am. Nat., XXVI, pp. 961-964. Nov., 1892.
58. The continuity of the germ plasm in vertebrates. Proc. Ind. Acad. Sci. for 1891, pp. 169-172. 1892.
59. The eyes of blind fishes. Proc. Ind. Acad. Sci. for 1891, p. 175. 1892.
60. Biological stations. Proc. Ind. Acad. Sci. for 1891, pp. 172-175. 1892.
61. Preliminary description of new fishes from the Northwest. (With R. S. Eigenmann.) Am. Nat., XXVII, pp. 151-154. Feb., 1893.
62. On the occurrence of the spiny box-fish (genus *Chilomycterus*) on the coast of California. Proc. U.S. Nat. Mus., XV, p. 485, 1 plate. July, 1893.
63. Catalogue of the fresh-water fishes of Central America and Southern Mexico. Proc. U.S. Nat. Mus. for 1893, XVI, pp. 53-60. 1893.
64. Preliminary note on the relationship of the species usually united under the generic name Sebastodes. (With C. H. Beeson.) Am. Nat., XXVII, pp. 668-671. July, 1893.
65. Early stages in the development of *Cymatogaster*. Proc. Ind. Acad. Sci. for 1892, pp. 58-62. 1893.
66. Explorations in Western Canada. Proc. Ind. Acad. Sci. for 1892, p. 56. 1893.
67. Local variations. Proc. Ind. Acad. Sci. for 1892, p. 81. 1893.
68. A revision of the American Cichlidæ. (With William L. Bray.) Ann. N.Y. Acad. Sci., VII, pp. 607-624. Jan., 1894.
69. Notes on some South American fishes. Ann. N.Y. Acad. Sci., VII, pp. 625-637. Feb., 1894.
70. On the viviparous fishes of the Pacific coast of North America. Bull. U.S. Fish Com. for 1892, pp. 381-478, 27 plates. 1894.
71. Results of explorations in Western Canada and Northwestern United States. Bull. U.S. Fish Com. for 1894, pp. 101-132, 4 plates. July 7, 1894.
72. Biological survey of Indiana: zoölogy. Proc. Ind. Acad. Sci. for 1893, pp. 67-76. Aug., 1894.

73. The effect of environment on the mass of local species. Proc. Ind. Acad. Sci. for 1893, pp. 226-229. Aug., 1894.
74. A revision of the fishes of the sub-family Sebastinae of the Pacific coast of America. (With C. H. Beeson.) Proc. U.S. Nat. Mus., XVII, pp. 375-407. 1894.
75. The fishes of Indiana. Report of the Indiana State Biological Survey. (With C. H. Beeson.) Proc. Ind. Acad. Sci. for 1893, pp. 76-108. 1894.
76. The fishes of Indiana. Reprinted from Proc. Ind. Acad. Sci. for 1893. Rep. Ind. State Fish Com. for 1894, pp. 40-64. 1894.
77. Names and locations of Indiana streams. Rep. State Fish Com. Ind. for 1894, pp. 65-79. 1894.
78. *Pteropodus dallii*, n. sp. Am. Nat., 1894, p. 66. 1894.
79. *Leuciscus balleatus* (Richardson). A study in variation. Am. Nat., XXIX, pp. 10-25, 5 plates, Jan., 1895; Proc. Ind. Acad. Sci. for 1894, pp. 87-99. 1895.
80. Development of sexual organs in *Cymatogaster*. Proc. Ind. Acad. Sci. for 1894, p. 138. Oct., 1895.
81. A new biological station and its aim. Proc. Ind. Acad. Sci. for 1894, pp. 34-35. Oct., 1895.
82. First report of the Indiana University Biological Station. Pt. I, Turkey lake as a unit of environment, pp. 209-239. Pt. II, The inhabitants of Turkey lake, pp. 239-264. Pt. III, Variation, pp. 265-296. Proc. Ind. Acad. Sci. for 1895, plates. Feb., 1896.
83. The bearing of the origin and differentiation of the sex cells in *Cymatogaster* on the idea of the continuity of the germ plasm. Am. Nat., XXX, pp. 265-271. April, 1896.
84. Sex differentiation in the viviparous teleost *Cymatogaster*. Archiv f. Entwicklungsmechanik, IV, pp. 125-179, 6 plates, April, 1896. Abstract in Trans. Am. Micr. Soc., XVII, pp. 172-173. 1896.
85. *Steindachneria*. Am. Nat., XXXI, pp. 158-159. 1897.
86. Viviparous fishes. Overland Mo., 1899, pp. 217-224. 1899.
87. The Amblyopsidae, the blind fish of America. Rep. Brit. Asso. for 1897, pp. 685-686. 1898.
88. The origin of cave faunas (abstract). Ind. Acad. Sci. for 1897, pp. 229-230. 1898.
89. The Amblyopsidae and eyes of blind fishes (abstract). Proc. Ind. Acad. Sci. for 1897, pp. 230-231. 1898.
90. A new blind fish. Proc. Ind. Acad. Sci. for 1897, p. 231. 1898.
91. A case of convergence. Sci., N.S., IX, No. 217, 280-282 (Feb., 1899); Proc. Ind. Acad. Sci. for 1898, pp. 247-257. 1899.
92. Biological stations. Ind. Woman. April, 1898.
93. The Indiana University Biological Station. Sci., N.S., X, pp. 925-929 (Dec. 22, 1899); Inland Educ. for 1900, pp. 61-65, figures. 1899.
94. Plans for the new buildings of the Biological Station. Proc. Ind. Acad. Sci. for 1898, pp. 55-58. 1899.

95. Explorations in the caves of Missouri and Kentucky. Proc. Ind. Acad. Sci. for 1898, pp. 58-61. 1899.
96. The blind fishes of North America. Pop. Sci. Mo., LVI, pp. 473-486. Feb., 1899.
97. The eyes of the blind vertebrates of North America, I. The eyes of the Amblyopsidæ. Archiv f. Entwicklungsmechanik, VIII, pp. 545-617, 5 plates. March, 1899.
98. Notes on the blind fishes. Sci., N.S., IX, p. 370. March 10, 1899.
99. Preliminary notes upon the arrangement of rods and cones in the retina of fishes. (With George Hansell.) Proc. Ind. Acad. Sci. for 1898, p. 239. 1899.
100. Degeneration in the eyes of the Amblyopsidæ, its plan, process and causes. Proc. Ind. Acad. Sci. for 1898, pp. 239-241. 1899.
101. The ear and the hearing of the blind fishes. (With Albert C. Yoder.) Proc. Ind. Acad. Sci. for 1898, pp. 242-247, 2 plates. 1899.
102. *Chologaster agassizii* and its eyes. Proc. Ind. Acad. Sci. for 1898, p. 251. 1899.
103. The eye of *Typhlomolge* from the artesian wells of San Marcos, Tex. (abstract). Proc. Ind. Acad. Sci. for 1898, p. 251. 1899.
104. The eyes of *Typhlotriton spelæus* (abstract). (With W. A. Denny.) Proc. Ind. Acad. Sci. for 1898, pp. 252-253. 1899.
105. The blind rat of Mammoth cave. (With James Rollin Slonaker.) Proc. Ind. Acad. Sci. for 1898, pp. 253-257, figures. 1899.
106. Cave animals, their character, origin, and their evidence for or against the transmission of acquired characters. Sci., N.S., X, p. 883. Dec. 15, 1899.
107. The blind fishes. Biol. Lectures Marine Biol. Lab. of Woods Hole for 1899, pp. 113-126. 1900.
108. The mosaic of single and twin cones in the retina of fishes. (With George Daniel Shafer.) Am. Nat., XXXIV, pp. 109-118, 1 plate. Feb., 1900.
109. Degeneration in the eyes of the cold-blooded vertebrates of the North American caves. Sci., N.S., XI, pp. 492-503, figures. March 30, 1900.
110. The structure of blind fishes. Pop. Sci. Mo., LVII, pp. 48-58. May, 1900.
111. The eyes of blind vertebrates of North America, II. The eyes of *Typhlomolge rathbuni* Stejneger. Trans. Am. Micr. Soc., XXI, pp. 49-60, 2 plates. May, 1900.
112. Causes of degeneration in blind fishes. Pop. Sci. Mo., LVII, pp. 397-407. Aug., 1900.
113. Some cases of saltatory variation. (With Ulysses Cox.) Sci., N.S., XII, p. 300. Aug. 24, 1900.
114. A contribution to the fauna of the caves of Texas. Sci., N.S., XII, p. 301. Aug. 24, 1900.
115. Sobre alguns peixes de Sao Paulo, Brazil. (With Allen A. Norris.) Revista do Museu Paulista, IV, pp. 349-362. 1900.

116. Degeneration in the eyes of the cold-blooded vertebrates of the North American caves. Proc. Ind. Acad. Sci. for 1899, pp. 31-46. illustrations. 1900.
117. Convergent evolution as illustrated by the blind lizard Rhineura. Sci., N.S., XII, p. 302. Aug., 1900.
118. The development of the eyes in the blind-fish Amblyopsis. Proc. Am. Asso. Adv. Sci., 1900, p. 230; Sci., N.S., XII, p. 302. 1900.
119. The eyes of the cave salamander Typhlotriton. Sci., N.S., XII, p. 302. Aug. 24, 1900.
120. The development of the Conger eel. Sci., N.S., XII, pp. 401-402. Sept. 14, 1900.
121. The eyes of the blind vertebrates of North America, III. The structure and ontogenic degeneration of the eyes of the Missouri cave salamander. (With Winfield Augustus Denny.) Biol. Bull., II, pp. 33-40, 1 plate. Oct., 1900.
122. Description of a new cave salamander, *Spelerpes stejnegeri*, from the caves of southwestern Missouri. Trans. Am. Micr. Soc., XXII, pp. 189-192, 2 plates (1900); abstract, Proc. Ind. Acad. Sci. for 1900, pp. 167 (1901). 1900.
123. Some cases of saltatory variation. (With U. O. Cox.) Am. Nat., XXXV, pp. 33-38. Jan., 1901.
124. Bergiaria. (With Allen A. Norris.) Com. Mus. Nac. Buenos Aires, I, p. 272. March 18, 1901.
125. Unilateral coloration with a bilateral effect. (With Clarence Kennedy.) Sci., XIII, pp. 828-830. 1901.
126. Description of a new oceanic fish (*Psenes edwardsii*, n. sp.) found off southern New England. Bull. U.S. Fish Com., XXI, p. 35 (1901); abstract, Proc. Ind. Acad. Sci. for 1900, p. 166. 1901.
127. The egg and development of the Conger eel (*Leptocephalus conger*). Bull. U.S. Fish Com., XXI, pp. 37-44, illustrations (1901); abstract, Proc. Ind. Acad. Sci. for 1900, pp. 165-166. 1901.
128. Investigations into the history of the young Squeteague (*Cynoscion regalis*). Bull. U.S. Fish Com., XXI, pp. 45-51, illustrations (1901); abstract, Proc. Ind. Acad. Sci. for 1900, p. 166. 1902.
129. The Leptocephalus of the American eel and other American Leptocephalia. (With Clarence Hamilton Kennedy.) Bull. U.S. Fish Com., XXI, pp. 81-92, illustrations (1901); abstract, Sci., N.S. XIV, p. 631 (Oct. 25, 1901). 1901.
130. The mounting of the remains of *Megalonyx jeffersoni* from Henderson, Ky. Proc. Ind. Acad. Sci. for 1900, p. 166. 1901.
131. The solution of the eel question. Trans. Am. Micr. Soc., XXIII, pp. 5-18, 4 plates; Sci., N.S., XV, p. 636. 1902.
132. The physical basis of heredity. Pop. Sci. Mo., LXI, pp. 32-44. illustrations. May, 1902.
133. The blind fish of Cuba. Sci., N.S., XVI, p. 347; Carnegie Institution Year Book, Washington, D.C., 1904, No. 2, p. xlii. Aug. 29, 1902.

134. The Carnegie institution. Sci., N.S., XVI, pp. 792-793. Nov. 14, 1902.
135. The eyes of the blind vertebrates of North America, IV. The eyes of *Rhineura floridana*. Proc. Wash. Acad. Sci., IV, pp. 533-548, 3 plates (Sept., 1902); abstracts, Proc. Ind. Acad. Sci. for 1901, p. 107 (1902); Sci., N.S., XIV, p. 631 (Oct. 25, 1901). 1901, 1902.
136. The history of the eye of Amblyopsis (abstracts). Proc. Ind. Acad. Sci. for 1901, pp. 101-105 (1902); Sci., N.S., XIV, p. 631 (Oct. 25, 1901); Sci., N.S., XV, pp. 523-524. 1901, 1902.
137. Zoölogical miscellany. Proc. Ind. Acad. Sci. for 1901, pp. 107-113. 1902.
138. The solution of the eel problem. World Today, IV, pp. 478-482. April, 1903.
139. In search of blind fishes in Cuba. World Today, V, pp. 1131-1136, illustrations. Sept., 1903.
140. Auf der Suche nach blinden Fischen in Cuba. Die Umschau, VII, pp. 365-367. May 2, 1903.
141. Variation notes. (With C. H. Kennedy.) Biol. Bull., IV, pp. 227-230. April, 1903.
142. Report on the fresh-water fishes of western Cuba. Bull. U.S. Fish Com. for 1902, pp. 211-236, 4 plates. July, 1903.
143. The water supply of Havana, Cuba. Sci., N.S., XVIII, pp. 281-282 (Aug. 28, 1903); Proc. Ind. Acad. Sci. for 1902, pp. 65-67. 1903.
144. On a collection of fishes from Paraguay with a synopsis of the American genera of cichlids. (With C. H. Kennedy.) Proc. Acad. Sci. Phila. for 1903, pp. 497-537. Sept., 1903.
145. Some new genera of South American fresh-water fishes and new names for some old genera. Smithson. Miscell. Collect., XLV, pp. 144-148. Dec., 1903.
146. The eyes of the blind vertebrates of North America, V. The history of the eye of Amblyopsis from the beginning of its development to its disintegration in old age. E. L. Mark anniversary volume, pp. 167-204, plates xii-xv; abstract, Proc. Ind. Acad. Sci. for 1901, pp. 101-105. 1904.
147. On a Leptocephalus of the Conger eel. Sci., N.S., XIX, pp. 629-630, figures. 1904.
148. Divergence and convergence in fishes. Biol. Bull. Woods Hole, VIII, pp. 59-66, 4 figures. 1905.
149. The mailed cat-fishes of South America (Loricariidae). Sci., N.S., XXI, pp. 792-795. 1905.
150. The Gymnotidae. (Joint author with David Perkins Ward.) Proc. Wash. Acad. Sci., VII, pp. 159-188, plates VII-XI. June 20, 1905.
151. The fishes of Panama. Sci., N.S., XXII, pp. 18-20. July 7, 1905.
152. Fresh-water fishes of South and Middle America. Pop. Sci. Mo., June, 1906, pp. 515-530. 1906.
153. The Smithsonian Institution and research. Sci., N.S., XXIV, pp. 553-556. Nov. 2, 1906.

154. An account of Amazon river fishes collected by J. B. Steere, with a note on *Pimelodus clarias*. (With Barton A. Bean.) Proc. U.S. Nat. Mus., XXXI, pp. 659-668, 5 figures. Jan. 16, 1907.
155. On a collection of fishes from Buenos Aires. Proc. Wash. Acad. Sci., VIII, pp. 449-458, plates XXI-XXIII. March 4, 1907.
156. The Poeciliid fishes of Rio Grande do Sul and the La Plata Basin. Proc. U.S. Nat. Mus., XXXII, pp. 425-433, 11 figures. May 23, 1907.
157. An annotated list of characin fishes in the United States National Museum and the Museum of Indiana University, with descriptions of new species. (With Fletcher Ogle.) Proc. U.S. Nat. Mus., XXXIII, pp. 1-36. Sept. 10, 1907.
158. Review of Fowler's 'Heterognathous fishes', with a note on the Stethaprioninae. Am. Nat., XLI, pp. 767-772. Dec., 1907.
159. On further collections of fishes from Paraguay. (With Waldo L. McAtee and David Perkins Ward.) Ann. Carnegie Mus., IV, pp. 110-157, plates XXXI-XLV. 1907.
160. Preliminary descriptions of new genera and species of Tetragonopterid characins. Bull. Mus. Comp. Zoöl., LII, pp. 93-106. Dec., 1908.
161. Adaptation. (In 'Fifty years of Darwinism', pp. 182-208, plates III and IV. Henry Holt and Co.) May, 1909.
162. The fresh-water fishes of Patagonia and an examination of the Archiplata-Archhelenis theory. Rep. Princeton Univ. Exped. Patagonia, 1896 to 1899, Zoöl., III, pp. 225-374, plates XXX-XXXVI, 2 maps. 1909.
163. Cave vertebrates of North America: a study in degenerative evolution. Publ. of the Carnegie Institution, No. 104, pp. 341, frontispiece, plates A and 1-29. June 9, 1909.
164. Reports on the expedition to British Guiana of the Indiana University and the Carnegie Museum, 1908, Rep. No. 1. Some new genera and species of fishes from British Guiana. Ann. Carnegie Mus., VI, pp. 4-54. Aug. 17, 1909.
165. Catalogue of the fresh-water fishes of tropical and south temperate America. Rep. Princeton Univ. Exped. Patagonia, 1896 to 1899, Zoölogy, III, pp. 375-511. Feb. 12, 1910.
166. Description of two new Tetragonopterid fishes in the British museum. Ann. and Mag. Nat. Hist., Ser. 8, VII, pp. 215-217. Feb., 1911.
167. New characins in the collection of the Carnegie Museum. Ann. Carnegie Mus., VIII, pp. 164-181, plates IV-IX. Dec., 1911.
168. Description of a new species of Pygidium. Ann. Carnegie Mus., p. 214, plate XXXII. 1911.
169. A list of localities at which Mr. Haseman collected. Ann. Carnegie Mus., VII, pp. 299-314. Oct., 1911.
170. The fresh-water fishes of British Guiana, including a study of the ecological groupings of species, and the relation of the fauna of the plateau to that of the lowlands. Mem. Carnegie Mus., V, pp. xx, 578, plates A and I-CIII. Aug., 1912.

171. The Cuban blind fishes. Proc. 7th Internat. Zool. Congr., Boston, 1907, pp. 697-698. 1912.
172. The origin of the fish-fauna of the fresh waters of South America. Proc. 7th Internat. Zool. Congr., Boston, 1907, pp. 958-959. 1912.
173. Some results from an ichthyological reconnaissance of Colombia, South America, I. Ind. Univ. Studies, No. 16, pp. 27. Dec. 23, 1912.
174. A naturalist in British Guiana. Outdoor World and Recreation, XLVIII, No. 5, pp. 250-251. April, 1913.
175. Some results from an ichthyological reconnaissance of Colombia, South America, II. Ind. Univ. Studies, No. 18, pp. 32. June, 1913.
176. On two new species of fishes collected by Miss Lola Vance in Peru. Ann. Carnegie Mus., VIII, pp. 421-422. May 5, 1913.
177. The fishes of South America. Bull. Pan-American Union, XXXVII, No. 6, pp. 781-800, 18 figures. Dec., 1913.
178. Los peces de Sud America. Boletin de la Union Panamericana, XXXVIII, No. 1, pp. 1-21. 1914.
179. New fishes from western Colombia, Ecuador, and Peru. (With Arthur Henn and Charles Wilson.) Ind. Univ. Studies, No. 19, pp. 15. Jan., 1914.
180. Some results from studies of South American fishes. Ind. Univ. Studies, No. 20, pp. 18-48. Apr'l, 1914.
181. On new species of fishes from the Rio Meta basin of eastern Colombia and on albino or blind fishes from near Bogota. Ind. Univ. Studies, No. 23, pp. 229-230. Sept., 1914.
182. On new species of fishes from Colombia, Ecuador, and Brazil. (With Arthur Henn.) Ind. Univ. Studies, No. 24, pp. 231-234. Sept., 1914.
183. The Gymnotidae of trans-andean Colombia and Ecuador. (With Homer G. Fisher.) Ind. Univ. Studies, No. 25, pp. 235-237. Sept., 1914.
184. The Cheirodontinae, a sub-family of minute characid fishes of South America. Mem. Carnegie Mus., VII, pp. 1-99. Dec. 20, 1915.
185. The Serrasalminae and Mylinae. Ann. Carnegie Mus., IX, pp. 226-272. June 1, 1915.
186. Description of a new *Sphagebranchus* from the Bahamas. Ann. Carnegie Mus., X, pp. 55-56. Jan. 31, 1916.
187. On *Apareiodon*, a new genus of characid fishes. Ann. Carnegie Mus., X, pp. 71-76. Jan. 31, 1916.
188. New and rare fishes from South American rivers. Ann. Carnegie Mus., X, pp. 77-86. Jan. 31, 1916.
189. Description of three new species of characid fishes. (With Arthur W. Henn.) Ann. Carnegie Mus., X, pp. 87-90. Jan. 31, 1916.
190. On the species of *Salminus*. Ann. Carnegie Mus., X, pp. 91-92. Jan. 31, 1916.
191. Some species of *Farlowella*. (With Lola Vance.) Ann. Carnegie Mus., XI, pp. 297-303. March, 1917.

192. *Pimelodella* and *Typhlobagrus*. Mem. Carnegie Mus., VII, pp. 229-258. April, 1917.
193. The American Characidae. Mem. Mus. Comp. Zoöl., Harvard Coll. XLIII, Pt. 1, pp. 1-102, plates 1-8, 12, 14, 15, 16, 95, 98, 100, 101. Aug., 1917.
194. On some species of *Rhamdia*, a genus of South American Siluridae, in the Carnegie Museum. (With Homer G. Fisher.) Ann. Carnegie Mus., XI, pp. 394-397. Nov., 1917.
195. New and rare species of South American Siluridae in the Carnegie Museum. Ann. Carnegie Mus., XI, pp. 394-404. Nov. 3, 1917.
196. Eighteen new species of fishes from northwestern South America. Proc. Am. Phil. Soc., LVI, pp. 674-689. 1917.
197. Descriptions of sixteen new species of Pygidiidae. Proc. Am. Phil. Soc., LVI, pp. 690-703. 1917.
198. The homes of blind fishes. The Geographical Rev., IV, No. 3, pp. 171-182. Sept., 1917.
199. The American Characidae. Mem. Mus. Comp. Zoöl., Harvard Coll. XLIII, Pt. 2, pp. 103-208, plates 9, 10, 11, 13, 17 to 29, 33, 78 to 80, 93. Jan., 1918.
200. The Irwin expedition. Sci., N.S., XLVIII, pp. 108-109. Aug. 2, 1918.
201. The aquatic vertebrates. (In Ward and Whipple's 'Fresh-water biology', pp. 1021-1066.) 1918.
202. The Pygidiidae, a family of South American cat-fishes. Mem. Carnegie Mus., VII, pp. 259-373, plates XXVI to LVI. Sept., 1918.
203. The Pygidiidae. Proc. Ind. Acad. Sci. for 1917, pp. 59-66. Sept., 1918.
204. The Irwin expedition. Sci., N.S., L, pp. 100-102. Aug. 1, 1919.
205. *Trogloglanis Pattersoni*, a new blind fish from San Antonio, Tex. Proc. Am. Phil. Soc., LVIII, pp. 397-400. 1919.
206. Steindachneridion. (With Rosa Smith Eigenmann.) Sci., N.S., L, pp. 525-526. Dec. 5, 1919.
207. The Irwin expedition to Peru, Bolivia, and Chile. Ind. Univ. Alum. Quart., VII, No. 1, pp. 1-16. Jan., 1920.
208. Limits of the genera *Vandellia* and *Urinophilus*. Sci., N.S., LI, p. 441. April 30, 1920.
209. The fishes of Lake Valencia, Caracas, and the Rio Tuy at El Concejo, Venezuela. Ind. Univ. Studies, VII, No. 44, pp. 13, 3 plates, 3 text-figures. June 1, 1920.
210. The fish fauna of the Cordillera of Bogota. Jour. Wash. Acad. Sci., X, pp. 461-468. Oct., 1920.
211. South America west of the Maracaibo, Orinoco, Amazon, and Titicaca basins, and the horizontal distribution of its fresh-water fishes. Ind. Univ. Studies, VII, No. 45, pp. 24. Dec., 1920.
212. The fishes of the rivers draining the western slope of the Cordillera Occidental of Colombia, Rios Atrato, San Juan, Dagua, and Patia. Ind. Univ. Studies, VII, No. 46, pp. 19. Dec., 1920.

(MRS.) MARION DURBIN ELLIS.

A.B., Indiana University, 1909; A.M., 1910.

1. An analysis of the rate of regeneration throughout the regeneration process. Jour. Exp. Zool., VII, pp. 397-420. Oct., 1909.
2. Reports on the expedition to British Guiana of the Indiana University and the Carnegie Museum, 1908, Report No. 2: A new genus and twelve new species of tetragonopterid characins. Ann. Carnegie Mus., VI, pp. 55-72. Aug. 17, 1909.
3. On the species of Hasemanina, Hyphessobrycon, and Hemigrammus collected by J. D. Haseman for the Carnegie Museum. Ann. Carnegie Mus., VIII, pp. 148-163, plates I-III. Dec., 1911.
4. The plated Nematognaths. Ann. Carnegie Mus., VIII, pp. 384-413, plates XXV-XXXI. May 5, 1913.

MAX MAPES ELLIS.

A.B., Indiana University, 1907; A.M., 1908; Ph.D., 1911.

1. The influence of the amount of injury upon the rate of regeneration in *Mancasellus macrourus* (Garman). Biol. Bull., XIII, pp. 107-113. Aug., 1907.
2. Some notes on the factors controlling the rate of regeneration in *Rana clamata* Daudin. Biol. Bull., XIV, pp. 281-283. 1908.
3. The relation of the amount of tail regenerated to the amount removed in tadpoles of *Rana clamitans*. Jour. Exp. Zool., VII, pp. 421-455. Oct., 1909.
4. The gymnotid eels of tropical America. Mem. Carnegie Mus., VI, pp. 109-195, plates XV-XXXIII. Aug., 1913.

HOMER G. FISHER.

A.B., Indiana University, 1914; A.M., 1915.

1. Gymnotidae of trans-andean Colombia and Ecuador. (With C. H. Eigenmann.) Ind. Univ. Studies, No. 25, pp. 235-237. 1914.
2. On some species of Rhamdia, a genus of South American Siluridae, in the Carnegie Museum. (With C. H. Eigenmann.) Ann. Carnegie Mus., XI, pp. 394-397. 1917.
3. A list of the Hypophthalmidae, the Diplomystidae, and of some unrecorded species of Siluridae in the collections of the Carnegie Museum. Ann. Carnegie Mus., XI, pp. 405-427, 1 plate. 1917.

OREN ERNEST FRAZEE.

A.B., Indiana University, 1910; A.M., 1912.

1. The effect of electrical stimulation upon the rate of regeneration in *Rana pipiens* and *Amblystoma jeffersonianum*. Jour. Exp. Zool., VII, pp. 457-475. Oct., 1909.

WILLIAM MARION GOLDSMITH.

A.B., Hillsdale College, 1913; A.M., Indiana University, 1915; Ph.D., 1920.

1. Relation of the true nucleolus to the linin network in the growth period of *Pselliodes cinctus*. Biol. Bull., XXXI, pp. 121-136, 30 figures, 2 plates. 1916.

2. Field notes on the distribution and life habits of the tiger beetles (Cicindelidae) of Indiana. Proc. Ind. Acad. Sci. for 1916, pp. 447-455, 1 map. 1919.
3. A comparative study of the chromosomes of the tiger beetles (Cicindelidae). Jour. Morph., XXII, pp. 437-488, 9 plates. 1919

WALTER LEWIS HAHN.

A.B., Indiana University, 1905; A.M., 1907; Ph.D., 1908.

1. Some habits and sensory adaptations of cave-inhabiting bats. Biol. Bull., XV, pp. 135-193. Aug., Sept., 1908.
2. Notes on the mammals and cold-blooded vertebrates of the Indiana University farm, Mitchell, Ind. Proc. U.S. Nat. Mus., XXXV, pp. 545-581. Dec. 7, 1908.
3. The mammals of Indiana, a descriptive catalogüe of the mammals occurring in Indiana in recent times. Rep. Dept. Geol. Nat. Res. Ind. for 1909, pp. 418-663. 1909.

MARY THERESA HARMAN.

A.B., Indiana University, 1907; A.M., 1909; Ph.D., 1912.

1. Method of cell division in the sex cells of *Taenia taeniaformis*. Jour. Morph., XXIV, pp. 205-243, 8 plates. 1913.

JOHN DIEDRICH HASEMAN.*

A.B., Indiana University, 1905; A.M., 1907; Ph.D., Columbia University, 1911.

1. A new *Campostoma* from Indiana. Proc. Ind. Acad. Sci. for 1905, pp. 161-163. 1906.
2. The direction of differentiation in regenerating crustacean appendages. Archiv. Entwickelungsmech. d. Organismen, XXIV, pp. 617-637, plates XIX-XXVII. Dec. 17, 1907.
3. The reversal of the direction of differentiation in the chelipeds of the hermit crab. Archiv. Entwickelungsmech. d. Organismen, XXIV, pp. 663-669, plates XXIX. Dec. 17, 1907.

THOMAS J. HEADLEE.

A.B., Indiana University, 1903; A.M., 1905; Ph.D., Cornell University, 1906

1. Ecological notes on the mussels of Winona Lake. (With James Simonton.) Proc. Ind. Acad. Sci. for 1903, pp. 173-180. 1904.
2. Ecological notes on the mussels of Winona, Pike, and Center lakes of Kosciusko county, Indiana. Biol. Bull., XI, pp. 305-318. Nov., 1906.

*After leaving the University Dr. Haseman spent over two years, under the general direction of Dean Eigenmann, exploring in South America for the Carnegie Museum. On his return he prepared the following reports on some of the material collected:

1. A brief report upon the expedition of the Carnegie Museum to central South America, by John D. Haseman, together with a list of localities at which Mr. Haseman collected, by C. H. Eigenmann. Ann. Carnegie Mus., VII, pp. 287-314. Oct., 1911.
2. Descriptions of some new species of fishes and miscellaneous notes on others obtained during the expedition of the Carnegie Museum to central South America. Ann. Carnegie Mus., VII, pp. 315-328. Oct., 1911.
3. An annotated catalog of the Cichlid fishes collected by the expedition of the Carnegie Museum to central South America, 1907-10. Ann. Carnegie Mus., VII, pp. 329-372. Oct., 1911.
4. Some new species of fishes from the Rio Iguassu. Ann. Carnegie Mus., VII, pp. 374-387. Oct., 1911.

ARTHUR WILBUR HENN.

A.B., Indiana University, 1914; A.M., 1915.

1. New fishes from western Colombia, Ecuador, and Peru. (With C. H. Eigenmann and Charles Wilson.) Ind. Univ. Studies, No. 19, pp. 15. Jan., 1914.
2. On new species of fishes from Colombia, Ecuador, and Brazil. (With C. H. Eigenmann.) Ind. Univ. Studies, No. 24, pp. 231-234. Sept., 1914.
3. Indiana University expeditions to northwestern South America. Sci., N.S., XL, pp. 602-606. Oct. 23, 1914.
4. Description of three new species of characid fishes. (With C. H. Eigenmann.) Ann. Carnegie Mus., pp. 87-90. Jan. 31, 1916.
5. On various South American poeciliid fishes. Ann. Carnegie Mus., X, pp. 93-142. Jan. 31, 1916.

GLENWOOD W. HENRY.

A.B., Wabash College, 1907; A.M., Indiana University, 1913.

1. On the vertical distribution of the plankton in Winona Lake. Proc. Ind. Acad. Sci. for 1913, pp. 77-92, 17 figures. 1914.

GERTRUDE HITZE.

1. Bird nests of an old apple orchard near the Indiana University campus. Proc. Ind. Acad. Sci. for 1903, pp. 167-173. 1904.

JOHN LEMUEL HOUSE.

A.B., Indiana University, 1903; A.M., 1910.

1. The crustacea of Winona Lake. Proc. Ind. Acad. Sci. for 1910. 1911.

HERBERT GLENN IMEL.

A.B., Indiana University, 1914; A.M., 1916.

1. Some preliminary observations on the oxygenless region of Center Lake, Kosciusko county. Proc. Ind. Acad. Sci. for 1915, pp. 345-356. 1916.

ALFRED C. KINSEY, Assistant Professor of Zoölogy.

S.B., Bowdoin College, 1916; S.D., Harvard University, 1919.

1. Fossil Cynipidæ. Psyche, XXVI, pp. 44-49. 1919.
2. An African figitid. Psyche, XXVI, pp. 162-163. 1919.
3. New species and synonymy of American Cynipidæ. Bull. Am. Mus. Nat. Hist., XLII, pp. 293-317, plates XX-XXVII. Dec. 20, 1920.
4. Life histories of American Cynipidæ. Bull. Am. Mus. Nat. Hist., XLII, pp. 319-357, plates XXVIII-XXXI. Dec. 20, 1920.
5. Phylogeny of some cynipid genera and biological characteristics. Bull. Am. Mus. Nat. Hist., XLII, pp. 357-402, plate XXXII. Dec. 20, 1920.

WALDO LEE MCATEE.

A.B., Indiana University, 1904; A.M., 1906.

1. The birds of the vicinity of Indiana University. Proc. Ind. Acad. Sci. for 1904, pp. 65-202. 1905.

2. The life history of the cave salamander *Spelerpes maculicaudus* (Cope). (With A. M. Banta.) Proc. U.S. Nat. Mus., XXX, pp. 67-83, plates 8-10. 1906.
3. A list of the mammals, reptiles, and batrachians of Monroe county. Proc. Biol. Soc. Wash., XX, pp. 1-16. 1907.

NORMAN EUGENE McINDOO.

A.B., Indiana University, 1906; A.M., 1910; Ph.D., University of Pennsylvania, 1911.

1. On some fishes of western Cuba. Proc. Acad. Nat. Sci. Phila., pp. 484-488. Oct., 1906.
2. Biology of the Shawnee cave spiders. Biol. Bull., XIX, pp. 303-323. Nov., 1910.
3. Notes on some Arachnids from the Ohio valley. Biol. Bull., XX, pp. 183-187. Feb., 1911.

NEWTON MILLER.

A.B., Indiana University, 1905; A.M., 1906; Ph.D., Clark University, 1908.

1. The fishes of the Montagua river, Guatemala. Bull. Am. Mus. Nat. Hist., XXIII, pp. 95-123. Feb., 1907.

(MRS.) EFFA FUNK MUHSE.

A.B., Indiana University, 1903; A.M., 1907; Ph.D., 1908.

1. The cutaneous glands of the common toad. Jour. Anat., IX, pp. 321-360, plates I-VII. 1909.

FLETCHER OGLE.

A.B., Indiana University, 1906.

1. An annotated list of characin fishes in the United States National Museum and the museum of Indiana University, with descriptions of new species. (Joint author with C. H. Eigenmann.) Proc. U.S. Nat. Mus., XXXIII, pp. 36. Sept. 10, 1907.

FERNANDUS PAYNE, Professor of Zoölogy.

A.B., Indiana University, 1905; A.M., 1906; Ph.D., Columbia University, 1909.

1. The eyes of the blind vertebrates of North America, VII. The eyes of *Amphisbæna punctata*, a blind lizard from Cuba. Biol. Bull. XI, pp. 60-67. 1906.
2. The reactions of the blind fish, *Amblyopsis spelæus*, to light. Biol. Bull., XIII, pp. 317-323. 1907.
3. On the sexual differences of the chromosome-groups in *Galgulus ocellatus*. Biol. Bull., XIV, pp. 297-303. 1908.
4. Some new types of chromosome distribution and their relation to sex. Biol. Bull., XVI, pp. 119-166. 1909.
5. The chromosomes of *Acholla multispinosa*. Biol. Bull., XVIII, pp. 174-179. 1910.
6. The separated blastomeres of centrifuged eggs of *Arbacia*. Sci., N.S., XXX, pp. 934-935. 1909.
7. Forty-nine generations in the dark. Biol. Bull., XVIII, pp. 188-190. 1910.

8. *Drosophila ampelophila* bred in the dark for sixty-nine generations. Biol. Bull., XXI, pp. 297-301. 1911.
9. A further study of the Reduviidae, etc. Jour. Morph., XXIII, pp. 331-347. 1912.
10. The chromosomes of *Gryllotalpa borealis*. Archiv für Zellforschung, IX, pp. 141-148. 1912.
11. A study of the effect of radium on the eggs of *Ascaris megalocephala univalens*. Archiv Entwicklungsmech. d. Organismen, XXXVI, pp. 287-293. 1913.
12. Chromosomal variations and the formation of the first spermatocyte chromosomes in the European earwig, *Forficula* sp. Jour. Morph., XXV, pp. 559-585. 1914.
13. A study of the germ cells of *Gryllotalpa borealis* and *Gryllotalpa vulgaris*. Jour. Morph., XXVIII, pp. 287-327. 1916.
14. The effect of artificial selection on bristle number in *Drosophila ampelophila* and its interpretation. Proc. Nat. Acad. Sci., IV, pp. 55-58. 1918.
15. An experiment to test the nature of the variations on which selection acts. Ind. Univ. Studies, V, No. 36, pp. 45. 1918.

FRANK HENRY PIKE.

A.B., Indiana University, 1903; Ph.D., Chicago University, 1908.

1. The degenerate eyes in the Cuban cave shrimp. *Palæmonites Eigenmanni* Hay. Biol. Bull., XI, pp. 267-276. Oct., 1906.
2. A critical and statistical study of the determination of sex, particularly in human offspring. Am. Nat., XLI, pp. 303-322. 1905.

FRANKLIN PEARCE REAGAN.

A.B., Indiana University, 1913; Ph.D., Princeton University, 1916.

1. The fifth aortic arch of mammalian embryos; the nature of the last pharyngeal evagination. Am. Jour. Anat., XII, pp. 493-514. 1912.

THURMAN BROOKS RICE.

A.B., Indiana University, 1914; A.M., 1917; M.D., 1920.

1. A study of the relations between plant growth and combined Nitrogen in Winona Lake, Ind. Proc. Ind. Acad. Sci. for 1916, pp. 333-362. 1917.

WILL SCOTT, Assistant Professor of Zoölogy.

A.B., Indiana University, 1908; A.M., 1908; Ph.D., 1911.

1. An ecological study of the plankton of Shawnee cave, with notes on the cave environment. Biol. Bull., XVII, pp. 386-407. 1909.
2. The fauna of a solution pond. Proc. Ind. Acad. Sci. for 1910, pp. 395-440. 1911.
3. The regenerated scales of *Fundulus heteroclitus* Linne with a preliminary note on their formation. Proc. Ind. Acad. Sci. for 1911, pp. 439-444. 1912.
4. The relation of lakes to floods, with special reference to certain lakes and streams of Indiana. Proc. Ind. Acad. Sci. for 1913, pp. 173-187. 1914.

5. Report on 'A list of the scientific and technical serials in the libraries of the state of Indiana'. (Joint author with Howard J. Banker.) Proc. Ind. Acad. Sci. for 1913, pp. 237-364. 1914.
6. Report on the lakes of the Tippecanoe basin (Indiana). Ind. Univ. Studies, III, No. 31, pp. 39, 12 maps. July, 1916.
7. The food of nestling birds. Proc. Ind. Acad. Sci. for 1915, pp. 323-344. 1916.
8. An epidemic among the fishes of Huffman's lake. Proc. Ind. Acad. Sci. for 1917, pp. 67-71. 1918.

JAMES WIGGINS SIMONTON.

A.B., Indiana University, 1903; J.D., Chicago University, 1908.

1. Ecological notes on the mussels of Winona lake. (With Thomas Headley.) Proc. Ind. Acad. Sci. for 1903, pp. 173-180. 1904.

CHARLES HADDON SPURGEON.

A.B., Franklin College, 1905; A.M., Indiana University, 1912.

1. The eyes of *Cambarus setosus* and *Cambarus pellucidus*. Biol. Bull., XXVIII, pp. 385-392, 1 plate. 1915.

EDNA RUSSELL THAYER.

1. A day's work in bird-land. Nature Study Rev., II, pp. 289-295. 1906.

LOLA VANCE.

A.B., DePauw University, 1907; A.M., Indiana University, 1912.

1. Some species of Farlowella. (With C. H. Eigenmann.) Ann. Carnegie Mus., XI, pp. 297-302. March 31, 1917.

DAVID PERKINS WARD.

1. The Gymnotidae. (With C. H. Eigenmann.) Proc. Wash. Acad. Sci., VII, pp. 159-188, plates VII-XI. June, 1905.
2. On further collections of fishes from Paraguay. (With C. H. Eigenmann and W. L. McAtee.) Ann. Carnegie Mus., IV, pp. 110-157. 15 plates. 1907.

DON CAMERON WARREN.

A.B., Indiana University, 1914; A.M., 1917.

1. Mutations in *Drosophila busckii*. Am. Nat., LI, pp. 699-703. 1917.
2. The effect of selection upon sex-ratio in *Drosophila ampelophila*. Biol. Bull., XXXIV, pp. 351-371. 1918.
3. Selection for increased and decreased spotting on the abdomen of *Drosophila busckii*. Genetics, VI, pp. 60-110, figures. 1920.

CHARLES E. WILSON.

A.B., Indiana University, 1913; A.M., 1914.

1. New fishes from western Colombia, Ecuador, and Peru. (With C. H. Eigenmann and A. W. Henn.) Ind. Univ. Studies, No. 19, pp. 15. Jan., 1914.
2. Some marine fishes from Colombia and Ecuador. Ann. Carnegie Mus., X, pp. 57-70, 1 plate. Jan. 31, 1916.





SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00876 4235